The Johns Hopkins University
Conferring of Degrees at the Close of the Ninety-sixth Academic Year

May 28, 1972
Keyser Quadrangle
Homewood
Baltimore, Maryland

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ORDER OF PROCESSION

MARSHALS

MICHAEL BEER
GERALD S. GOTTERER
ROBERT E. GREEN
JOHN W. GRYDER
WILLIAM H. HUGGINS
MONROE LERNER
RICHARD A. MACKSEY
CHARLES B. MARSHALL
ALVIN NASON
EVERETT L. SCHILLER
PHOEBE B. STANTON
CHARLES R. WESTGATE

THE GRADUATES

*

MARSHALS

CARL F. CHRIST
ALSOPH H. CORWIN

THE DEANS
HONORED GUESTS
OFFICERS OF THE UNIVERSITY
THE TRUSTEES

*

MARSHALS

FRANCIS ROURKE
JOHN WALTON

THE FACULTIES

*

CHIEF MARSHAL

ROBERT H. ROY

THE CHAPLAIN
THE PROVOST OF THE UNIVERSITY
CANDIDATES FOR THE JOHNS HOPKINS UNIVERSITY
SOCIETY OF SCHOLARS
PRESENTORS OF THE HONORARY DEGREE CANDIDATES AND THE HONORARY DEGREE CANDIDATES
CHAIRMAN OF THE BOARD OF TRUSTEES
THE PRESIDENT OF THE UNIVERSITY

*

ORDER OF EVENTS

STEVEN MULLER
President of the University, presiding

* * *

PROCESSIONAL

Festival March
Felix Mendelssohn Bartholdy

The audience is requested to stand as the Academic Procession moves into the area and to remain standing until after the Invocation and the singing of the University Ode.

*

INVOCATION

CHESTER L. WICKWIRE
Chaplain of the University

*

"THE STAR-SPANGLED BANNER"
"THE UNIVERSITY ODE"

*

GREETINGS

ROBERT D. H. HARVEY
Chairman of the Board of Trustees

*

INDUCTION OF NEW MEMBERS INTO THE SOCIETY OF SCHOLARS

RAY MORRIS BOWEN
E. G. D. COHEN
DERYL HART
ANNA MARTTA HIETANEN-MAKELA
ABRAHAM HORWITZ
GEORGE JAMES
LAWRENCE C. KOLB
ALEXANDER D. LANGMUIR
ROBERT Q. MARSTON
DAVID ALAN PRICE EVANS
CHAO-CHENG WANG
W. HOWARD WRIGGINS

Scholars Presented by HARRY WOOLF
Provost of the University

*

MUSICAL INTERLUDE

Divertimento No. 1 in B flat for Winds
St. Anthony Choral: Andante
Rondo: Allegretto
Franz Josef Haydn

*

CONFERRING OF HONORARY DEGREES

DON CAMERON ALLEN
RALPH EDWARD GIBSON
EDGAR AUGUSTUS JEROME JOHNSON
FRANK B. WALSH

CONFERRING OF DEGREES ON CANDIDATES

BACHELORS OF ARTS
BACHELORS OF ENGINEERING SCIENCE

Presented by

GEORGE E. OWEN
Dean, Faculty of Arts and Sciences

* * *

ASSOCIATES OF ARTS
ASSOCIATES OF SCIENCE
BACHELORS OF SCIENCE
BACHELORS OF SCIENCE IN ENGINEERING

Presented by

ROMAN J. VERHAALEN
Dean, Evening College

* * *

MASTERS OF SCIENCE
MASTERS OF EDUCATION
MASTERS OF LIBERAL ARTS
CERTIFICATES OF ADVANCED STUDY IN EDUCATION
OR LIBERAL ARTS

Presented by

ROMAN J. VERHAALEN
Dean, Evening College

* * *

MASTERS OF SCIENCE
MASTERS OF HEALTH SCIENCES
MASTERS OF PUBLIC HEALTH

Presented by

JOHN C. HUME
Dean, School of Hygiene and Public Health

CONFERRING OF DEGREES ON CANDIDATES
continued

MASTERS OF ARTS

Presented by

FRANCIS O. WILCOX
Dean, School of Advanced International Studies

* * *

MASTERS OF ARTS

Presented by

RUSSELL H. MORGAN
Dean, School of Medicine

* * *

MASTERS OF SCIENCE IN ENGINEERING
MASTERS OF ARTS IN TEACHING
MASTERS OF ARTS

Presented by

GEORGE E. OWEN
Dean, Faculty of Arts and Sciences

* * *

DOCTORS OF SCIENCE
DOCTORS OF PUBLIC HEALTH
DOCTORS OF PHILOSOPHY

Presented by

JOHN C. HUME
Dean, School of Hygiene and Public Health

* * *

DOCTORS OF PHILOSOPHY

Presented by

FRANCIS O. WILCOX
Dean, School of Advanced International Studies

* * *

DOCTORS OF MEDICINE
DOCTORS OF PHILOSOPHY

Presented by

RUSSELL H. MORGAN
Dean, School of Medicine

* * *

CONFERRING OF DEGREES ON CANDIDATES
continued

DOCTORS OF PHILOSOPHY

Presented by

GEORGE E. OWEN
Dean, Faculty of Arts and Sciences

* * *

STATEMENT TO THE GRADUATES

STEVEN MULLER
President of the University

*

BENEDICTION

*

RECESSIONAL

Rondo: Allegro in E Flat, Opus 71
Ludwig Van Beethoven

Music by

PEABODY WIND QUINTET
SIDNEY FORREST, *Director*

The audience is requested to remain standing after the Benediction until the members of the faculties and graduates have left the area.

* * *

AWARDS

THE DELTA SIGMA PI SCHOLARSHIP KEY

in the Division of Administration and Business of the Evening College
for the highest average for the entire course

Awarded to

DANIEL SHAW LANKFORD

THE C. RICHARD MARTIN AWARD

in Political Economy for outstanding work by a first or second year graduate student

Awarded to

ROBERT B. ANDERSON

THE SARAH & ADOLPH ROSEMAN ACHIEVEMENT AWARD

in Chemistry in recognition of outstanding accomplishment

Awarded to

GARY W. SCHNUELLE

THE ROBERT BRUCE ROULSTON PRIZE

for excellence in German

Awarded to

EDWARD L. BOGGS, III
FRANK J. GILLY, JR.

THE JULIUS TURNER AWARD

for the best senior thesis in Political Science

Awarded to

JACK N. GOODMAN

THE WALL STREET JOURNAL STUDENT ACHIEVEMENT AWARD

in the Division of Administration and Business of the Evening College
for outstanding scholarship and exceptional promise of future success

Awarded to

JANET MOYLE HARRYMAN

CITATIONS FOR HONORARY DEGREES

Citation Read by

EARL R. WASSERMAN

in Presenting

DON CAMERON ALLEN

for the Degree of Doctor of Laws

Mr. President, for thirty years Don Cameron Allen, the Sir William Osler Professor of English Literature, has served this University with extraordinary distinction.

Throughout his career he has been the master of that select band of polymaths whose expert knowledge of Renaissance literature and learning—from astrology and hieroglyphs to scriptural exegesis—has been fundamental for adequate interpretation of our erudite early authors. More than anyone else, he has shaped the modern study of Renaissance literature and kept steady its high standards not only in a score of books and more than a hundred articles but also through his teaching, his notably generous encouragement and assistance of young scholars and colleagues, and his long editorship of the *Journal of English Literary History*.

While some of his enormous erudition is that of the distant past, he has always remained intellectually young, effectively negotiating between antiquarian learning and modern critical interests and renewing for us with his critical responsiveness the depth and continuity of imaginative life in poetry that still demands our attention. Only one who has thorough command of scholarship could present it, as he does, with modesty and entertaining wit and observe St. Paul's advice to "Let your speech be always with grace, seasoned with salt."

Having been so notably responsible for setting high standards for graduate study, it was only to be expected that the Modern Language Association of America—which he had served as vice president and whose journal he helped edit for many years—should turn to him for a study of the Ph. D. program. The resulting Allen Report has had wide and salutary influence on the reformation of the American graduate curriculum. Among the many public recognitions of his accomplishments are his election to the American Philosophical Society and the American Academy of Arts and Sciences, and his honorary degrees from the University of Chicago and from his alma mater, the University of Illinois.

As his colleague for a quarter of a century, I am grateful to take part in the presentation of an honorary degree of Doctor of Laws to Don Cameron Allen, who has long honored this University.

Citation Read by

RICHARD J. JOHNS

in Presenting

RALPH EDWARD GIBSON

for the Degree of Doctor of Medicine

Mr. President, it is a great pleasure to present Ralph Edward Gibson, a man who has had two distinguished careers at this University.

His first career began in 1946 when he became a member of the Applied Physics Laboratory. He served as its Director from 1948 to 1969. His 21-year tenure saw the Laboratory flourish under his warm and personal leadership. The Laboratory's role was broadened to encompass space, transportation, urban, and medical problems. It developed its Howard County site, and it officially became a division of the University.

Upon achieving the status of Director Emeritus in 1969 he began his second University career, this time as Professor of Biomedical Engineering in the School of Medicine. Here, in addition to his departmental activities, he brought his orderly and analytic talents to bear on a wide variety of problems ranging from reorganization of the medical record system to a consideration of the management of clinical units. He was elected as a charter member of the Medical School Council and was selected to be its Chairman *pro tempore* during its organization. He accomplished all of this and at the same time won the hearts of his colleagues on the medical faculty with his wry, good humor.

In recognition of his important contributions to the University, I am pleased to present Ralph Edward Gibson, and, in particular recognition of his contributions to the School of Medicine, he is presented for an honorary degree of Doctor of Medicine.

Citation Read by

FRANCIS O. WILCOX

in Presenting

EDGAR AUGUSTUS JEROME JOHNSON

for the Degree of Doctor of Laws

Mr. President, on behalf of the faculty and with the approval of the Board of Trustees, I present to you a candidate for the degree of Doctor of Laws.

Edgar A. J. Johnson is an innovator, an outstanding scholar, a superb teacher and a successful practitioner of shirt-sleeve diplomacy. I can think of no one who has made a greater contribution to our Johns Hopkins Bologna Center and to the School of Advanced International Studies where his tenacious dedication to high academic standards and his constructive interests in our programs of study have been a source of inspiration to us all.

Dr. Johnson was the co-founder of the Economic History Association and the first editor of The Journal of Economic History. His record also reflects a dozen years of experience as an able AID administrator and consultant in many lands—including Korea, Greece, Yugoslavia and India. He has taught at Harvard, Cornell, Maryland, Pennsylvania and other universities.

I believe it was August Comte who practiced the policy of cerebral hygiene; he refrained from reading any books except his own. Edgar Johnson has not yielded to this temptation although he does have a long shelf of books to his credit—some thirteen in all. These works consistently reflect creative scholarship of a high order. His *Organization of Space in Developing Countries*, published last year by the Harvard University Press, certainly breaks new ground, and his memoirs—also published last year—relate in delightful prose the life story of a professor-bureaucrat during an exciting period in American history. He has already embarked upon his fourteenth volume, *The Foundations of American Freedom.*

It might well be said that Dr. Johnson, like vintage wine, improves with each passing year.

Mr. President, it is a great personal privilege for me to present a wise and learned man—a vigorous advocate of constructive change—who has maintained constant fidelity to the principles of academic excellence. Would we had more professor-bureaucrats like E. A. J. Johnson!

Citation Read by

A. EDWARD MAUMENEE

in Presenting

FRANK B. WALSH

for the Degree of Doctor of Laws

Mr. President, Dr. Frank B. Walsh's contributions to medicine and ophthalmology have been fundamental and broad. He is "The Father of Neuro-ophthalmology" in America and in most of the other highly developed countries in the world today. This title is one of the highest honors that can be paid to a person in medicine for it indicates that that individual has entered and developed a specific field far beyond that of his predecessors. Dr. Walsh initiated and developed the various aspects of this subject in such a dynamic and far-reaching way that neuro-ophthalmology became an important aspect in the education of all students of medicine and especially of ophthalmologists and neurologists.

If one had to cite a specific accomplishment as Dr. Walsh's most outstanding achievement, it would be his encyclopedic three-volume book on medical and neuro-ophthalmology, which is now in its third edition. This book is the standard text for ophthalmic residents and ophthalmologists. In addition, it is a principal reference source for internists, neurosurgeons, neurologists and pediatricians.

As "The Father of Neuro-ophthalmology" almost every outstanding physician in this field has either studied under Dr. Walsh or has been tutored by one of his disciples.

Because of these outstanding accomplishments, Dr. Walsh has received honorary degrees from three universities and awards or prizes from ophthalmic and medical societies in this country, Germany, Canada, England and Ireland. Mr. President, it is most fitting that the University honor Dr. Frank B. Walsh with the degree of Doctor of Laws.

JOHNS HOPKINS SOCIETY OF SCHOLARS

The Johns Hopkins Society of Scholars was created on the recommendation of former President Milton S. Eisenhower and approved by action of the University Board of Trustees on May 1, 1967. The Society—the first of its kind in the nation—inducts former postdoctoral fellows at Johns Hopkins who have gained marked distinction in their fields of physical, biological, medical, social, or engineering sciences or the humanities, and for whom at least five years have elapsed since their postdoctoral work. The Committee of the Johns Hopkins Society of Scholars, whose members are equally distributed among the academic divisions, elects the Scholars from the candidates nominated by the academic divisions having programs for postdoctoral fellows. Each division has the privilege of nominating up to three candidates for each election year. The Scholars are invested during the graduation ceremony, the Commemoration Day ceremony, or on some similar occasion and are presented with a diploma and a medallion with black and gold ribbon to be worn around the neck with their academic costume.

Today's induction ceremony will honor the twelve new members of the Johns Hopkins Society of Scholars.

Ray Morris Bowen, associate professor of mechanical engineering and mathematical science at Rice University, holds degrees from Texas A&M and the California Institute of Technology and was a post-doctoral fellow in mechanics at Johns Hopkins in 1964-65. While at this University he was the first to attack the extremely difficult problem of extending the concepts of rational thermodynamics to mixtures of diffusing, chemically reacting substances. He has since become an authority in his field to the extent that modern theory of non-equilibrium thermochemistry is based partly on his work.

E. G. D. Cohen was a research associate in the Department of Physics at Johns Hopkins in 1958-59. He holds bachelor's and doctoral degrees from the University of Amsterdam and is presently professor of physics at Rockefeller University in New York. One of the world's leading exponents of classical statistical mechanics, Dr. Cohen has had the high honor of organizing a compilation of recent work in his area by leaders in the field, including his own work. He is one of a handful of physicists now working in the fundamental aspects of this highly important subject.

Dr. Cohen is unable to be present at the Commencement ceremony.

Deryl Hart received an M. D. degree in 1921 from Johns Hopkins, where he also served his internship and did post-doctoral study in surgery and pathology. He remained on the Johns Hopkins faculty until 1930 when he became professor of surgery and chairman of the Department of Surgery at Duke University School of Medicine. He served in those positions until 1960, and was president of the University from 1960 to 1963. He is a fellow and member of the board of governors of the American College of Surgeons, and officer or member of numerous other surgical societies.

Anna Martta Hietanen-Makela earned a Ph. D. at the University of Helsinki in 1938, and was a fellow in the Department of Geology at Johns Hopkins in the years just prior to World War II. After an interval in her homeland, she taught at Stanford University and Oregon State University. In 1949 she joined the U. S. Geological Survey as a geologist. A specialist in petrology, structural geology, metamorphism and metasomatism, she has distinguished herself both in field and laboratory work. Several years ago she was elected president of the oldest and largest section of the Geological Society of America.

Abraham Horwitz, a native of Chile, graduated from the University of Chile with an M. D. degree in 1936. For the next six years he taught at the University and did extensive work in infectious and communicable diseases. In 1943 he came to the Johns Hopkins School of Hygiene and Public Health and was awarded the M. P. H. the following year. In 1950 he drafted plans for the National Health Service of Chile, considered one of the most outstanding developments in Latin America in that decade. In 1960 he became director of the Pan American Health Organization and Regional Director General for the World Health Organization.

Dr. Horwitz is unable to be present at the Commencement ceremony.

George James was a leading figure in the public health field in New York City for many years. A 1945 graduate of the Johns Hopkins School of Hygiene and Public Health, he served first as epidemiologist with the New York State Health Department, then as Deputy Commissioner and Commissioner of Health in New York City. In 1965 he became associated with Mt. Sinai School of Medicine, serving as professor of community medicine and subsequently as president of the School. In his writing he contributed materially to the fields of epidemiology and health administration.

Deceased. The award will be presented posthumously.

Lawrence C. Kolb, professor and chairman of the Department of Psychiatry at Columbia University Medical School, received his M. D. from Johns Hopkins in 1934 and was a fellow in neurology at the Johns Hopkins Hospital from 1936 to 1938. He presently serves also as director of psychiatric service at New York's Presbyterian Hospital. He holds positions in a number of foundations in the mental health field and has served as advisor to numerous organizations, including the National Institute of Mental Health, and to the City of New York. In 1968 he was president of the American Psychiatric Association.

Alexander D. Langmuir, professor of community medicine at Harvard University School of Medicine, is the holder of an M. D. from Cornell University Medical College and a Master of Public Health degree from Johns Hopkins. He was associate professor of epidemiology at Johns Hopkins from 1946 to 1949, then became director of the Epidemiology Branch of the National Communicable Disease Center in Atlanta, a position he held for over 20 years. He has written extensively on all phases of epidemiology on a global basis and is recognized internationally as a leading contributor in this field.

Robert Q. Marston, director of the National Institutes of Health, holds degrees from Virginia Military Institute, the Medical College of Virginia and Oxford University. In 1949-50, he served an internship at the Johns Hopkins Hospital. He then began a career in medical education successively at the Medical College of Virginia, the University of Minnesota and the University of Mississippi, where he was dean of the School of Medicine, director of the medical center and vice chancellor. His association with the National Institutes of Health began in 1966, and he became director in 1968.

David Alan Price Evans is professor of medicine at the University of Liverpool, from which he holds six degrees. He was a fellow of pharmacogenetics at the Johns Hopkins School of Medicine in 1958-59, during which time he did classical work on the genetic control of INH metabolism. He has since earned wide distinction internationally as a researcher and writer in his field. In 1968, the University of Liverpool created a personal chair for Dr. Price Evans as professor of medicine, which was unprecedented at that institution. He presently also serves as consultant physician to Broadgreen Hospital and the Liverpool Royal Infirmary.

Dr. Price Evans received the award in separate ceremonies on February 22, 1972.

Chao-Cheng Wang, one of the most productive scientists in basic continuum mechanics, holds a B. S. degree from the National Taiwan University and a Ph. D. from Johns Hopkins, which he earned in 1965. He was a post-doctoral fellow at the University in 1965-66, and the following year was appointed assistant professor of mechanics. He is now professor of mathematical sciences at Rice University. He is the author of more than 30 papers, most of them considered to be of fundamental importance, on general continuum mechanics and other aspects of his field.

W. Howard Wriggins, professor of government and director of the Southern Asian Institute at Columbia University, holds a B. A. degree from Dartmouth and an M. A. and Ph. D. from Yale. Following a period of government service which led to his appointment as Senior Staff Member of the National Security Council, Dr. Wriggins was a research associate of the Washington Center of Foreign Policy Research at the School of Advanced International Studies. During this period he wrote "The Ruler's Imperative," an important contribution to the understanding of problems of government in emerging states.

THE UNIVERSITY MACE

The University Mace carried by the Chief Marshal, Professor Robert H. Roy, was first used at the 1954 Commemoration Day Exercises. Eight symbols are hand wrought in sterling silver on an ebony staff. The symbols represent man's cultural development from ancient times, through the Middle Ages and the Renaissance, to the modern era.

THE PRESIDENTIAL INSIGNIA

University President Steven Muller is wearing the Presidential Insignia signifying the authority vested in the President by the Board of Trustees. It is a chain of sterling silver links worn around the neck. Portraits of each of the ten Johns Hopkins University Presidents are engraved on the faces of ten of the links. On the reverse are engraved the names and dates of office of each President. Ten blank links for future use are included. The University Seal completes the design.

ACADEMIC DRESS

The custom of wearing academic dress stems from the Middle Ages, when scholars were also clerics and wore the costume of their monastic order. The hood was originally a cowl attached to the gown, which could be slipped over the head for warmth. The cap, originally round, later became the square mortar-board as we see it today.

Today the cap is the same for all American degrees, although the recipient of a doctoral degree is entitled to wear a gold tassel. The gown varies for the respective degrees. The Bachelor's gown is worn closed and can be distinguished by its long, pointed sleeves. The Master's gown is designed to be open with the arms worn through the slits in the elbows of the sleeves. The Doctor's gown, also worn open, has full, bell-shaped sleeves with three horizontal bars stitched across the upper arm. There is a velvet panel draped around the neck and stitched down the front edges. This velvet trimming may be either black or the same color as the velvet border of the hood.

The hood also varies for the respective degrees. The Bachelor's and Master's hoods are of the same design, pointed at the base. The Bachelor's hood is three feet long; the Master's hood is three and one half feet long. The Doctor's hood is four feet long, of fuller shape and rounded at the base.

The hood is bordered with velvet, the color of which indicates the field of study in which the degree was earned:

Dark blue — Philosophy
Light blue — Education
Orange — Engineering
Gold-yellow — Science
Green — Medicine
Salmon pink — Public Health
Pink — Music
Purple — Laws
White — Arts and Letters

The silk lining of the hood represents the institution which granted the degree. If more than one degree is held, the gown and hood of the higher or highest degree is worn. The Johns Hopkins University has adopted an alternative costume to be used by all holding Johns Hopkins doctoral degrees, both earned and honorary. The costume will consist of a gold robe with front and side panels in sable velvet and a six-sided Dutch academic cap with gold sweatband and tassel. The linings seen in today's academic procession may include:

Black, old gold chevron — Johns Hopkins
Light blue, white chevron — Columbia
Dark blue — Yale
Blue with white chevron — Duke
Dark blue, two orange chevrons — Illinois
Light blue, two white chevrons — North Carolina
Old gold, maroon chevron — Minnesota
Old gold — Iowa
Gold, blue chevron — California
Gold — Virginia
Purple, gold chevron — Northwestern
Purple — New York University
Bright red — Wisconsin
Plum, with scarlet — London
Maroon — Chicago
Crimson — Harvard
Carnelian, two white chevrons — Cornell
Cardinal — Stanford
Red, tri-chevron in center — Heidelberg
Dandelion yellow — Michigan
Maize, azure blue chevron — Sorbonne
Yellow and white — Rochester

THE UNIVERSITY ODE

Truth guide our University
And from all error keep her free;
Let Wisdom yield her choicest treasure,
And Freedom reach her fullest measure;
Oh, let her watchword ever be
The truth of God will make you free,
Will make you free!

THE UNIVERSITY MOTTO

Veritas vos liberabit.

The truth shall make you free.

—St. John 8:32

PHI BETA KAPPA

Members Elected in 1971-72

MARY D. AINSWORTH
DENNIS J. AMATO
MICHAEL J. ASKEN
SAMUEL P. ASPER
MICHAEL O. BALL
DONALD W. BENSON
JOHN A. BERTOLATUS
BRUCE EDWARD BOUCHARD
STEVEN L. BRESSLER
DAVID J. BYER
FRANCIS D. CARLSON
JOSEPH A. CARLTON
EUGENE B. CHANG
BARTON CHILDS
CARL F. CHRIST
JAMES S. COLEMAN
THOMAS W. COOPER
JONATHAN A. DANTZIG
MARK B. DERR
GOTTFRIED DIETZE
MICHAEL A. DOUKAS
DAVID B. DUNCAN
JOEL ELKES
KIRK EMGE
JERALD L. ERICKSEN
EDWIN R. FITZGERALD
CHARLES D. FLAGLE
DAVID R. FOX
RUTH B. FREEMAN
W. BRUCE FYE III
LARRY R. GERACE
LARRY P. GOLDBERG
WILLIAM H. GROVER
ROBERT W. HALL
WILLIAM F. HARRINGTON
DANIEL M. HARRIS
ERIK L. HEWLETT
JOHN C. HUME
JUN-ICHI IGUSA
HARRIS C. JACOBS
CHARLES M. JOHNSON III
SHELDON E. JORDAN
FREDERICK S. KAPLAN
ALLYN W. KIMBALL
MITCHELL L. KORNBLIT
CORNELIUS KRUSE
ALFRED ROBERT LIGHT
VICTOR A. LOWE
DONAL S. LUSE
MANFRED M. MAYER
DERMOT F. MC ALEESE
RANDELL L. MC KENZIE
GLENN T. MEADE
GLENN E. MITZEL
RAYMOND B. MONTGOMERY
VERNON B. MOUNTCASTLE
STEPHEN V. NEVILLE
WILLIAM I. NOTZ
ALAN I. NUSSBAUM
D. CHRISTOPHER OHLY
GARY R. PASTERNAK
AIHUD PEVSNER
OWEN M. PHILLIPS
RICHARD L. RILEY
BARRY F. ROSEN
ALAN I. RUBIN
PATRICK D. RUSSELL
JAMES G. SALERNO
EDMUND SAMBUCO
ALAN M. SCHIZ
MELVIN A. SCHWARZ
ROBERT M. SHAPIRO
WALTER H. SHELDON
JACK D. SIDOROV
JAY E. SIMKIN
LAMBERT STAMMERJOHN, JR.
LEON STRAUSS
WILLIAM J. STRIZEVER
PAUL TALALAY
CARL E. TAYLOR
CLIFFORD TRUESDEL
ALLAN H. VALGEMAE
ANDREW VAN TOSH
MARK K. WEDEL
HOWARD O. WEISSMAN
ROBERT M. WETTSTEIN
MALCOLM E. WINKLER
M. GORDON WOLMAN
ROBIN MARK WOOD
CRAIG L. WOODY
HARRY WOOLF
ROBERT D. WRIGHT
ERIC A. WULFSBERG
JOHN H. YOUNG

TAU BETA PI

The following graduating seniors have been elected to Tau Beta Pi—
the National Engineering Honor Society.

MICHAEL O. BALL
LESTER L. CRAMER
JONATHAN A. DANTZIG
JOHN J. HEFNER
GARRY L. JENKINS
KIRK R. KARWAN
DOUGLAS KELNER
JOHN C. LANG
WILLIAM E. NEWLAND
ROBERT C. NILSON
DANIEL H. OVERMAN
MICHAEL J. RICHARDSON
JOHN G. ROMANSKI
ALAN R. ROSEN
DONALD L. SCHLENGER
THOMAS A. SCHULTZ
LAMBERT W. STAMMERJOHN
GARY R. STONEBURNER
GEORGE WILLINGMYRE

Baccalaureate Candidates
in the Faculty of Arts and Sciences
Graduating with Departmental Honors

Robert P. Anderson
Michael O. Ball
Eric S. Bergofsky
Eugene A. Bonte
Tomlin P. Crowder
Edward R. Cummings
Jonathan A. Dantzig
Irvin C. Decatur
Thomas L. Duvall
Mark D. Forester
David R. Fox
Howard M. Fried
Steve C. Goldman
Robert P. Goodman
Harold D. Grinberg
Robert W. Hall
Richard A. Heddleson
Mary C. Hoffer
David X. Hoffman
John B. Holmblad
Steven C. Horii
Mark H. Houck
Tom R. Karras
Kirk R. Karwan
Douglas E. Kelner
Mitchell L. Kornblit
William H. Linder
William E. Little
Bruce J. MacPherson
Phyllis Magram
Donald S. Maier
Geoffrey E. Margrave
Charles W. Maxson
Paul E. McFarland
Daniel C. Ohly
Paul K. Prah
Frank L. Roediger
Richard E. Rosenthal
James C. Salerno
Edmund Sambuco
Richard S. Schafler
Thomas A. Schultz
Jay E. Simkin
Michael C. Snead
Lambert W. Stammerjohn
William J. Strizever
John R. Swanson, Jr.
Beverly J. Teel
Elliott R. Treby
Everett B. Waters
Scott A. Wolpert

Baccalaureate Candidates
in the Faculty of Arts and Sciences

Graduating with General Honors

Howard B. Adler
Richard G. Appel
Richard J. Archer
Michael J. Asken
Dean R. Backstrom
Michael O. Ball
John A. Bertolatus
Sean R. Bleck
Perry S. Block
Steven L. Bressler
Edward S. Buescher
David J. Byer
David D. Celentano
Eugene B. Chang
Thomas W. Cooper
Edward R. Cummings
Michael D. Danly
Jonathan A. Dantzig
Richard D. DeFuria
Octavio J. de Marchena
Mark B. Derr
George M. Diianni
Robert E. Doherty
Michael A. Doukas
Howard L. Drescher
David R. Fox
Howard M. Fried
Larry P. Goldberg
Steven C. Goldman
Robert P. Goodman
Darrell M. Gray
David A. Griesemer
William H. Grover
Robert Wm. Hall
Daniel M. Harris
Eric L. Hildebrand
Mary C. Hoffer
Michael K. Imura
Robert J. Ivry
Andrew C. Jacobs
George W. Johnston
Sheldon Em. Jordan
Frederick S. Kaplan
Kirk R. Karwan
George L. King
Mitchell L. Kornblit
Howard S. Levenson
Arthur S. Levine
Andrew W. Levinson
Samuel N. Libber
William H. Linder
John R. Lipsey
William E. Little
Bruce J. MacPherson
Phyllis Magram
Donald S. Maier
Charles H. McComas
Paul E. McFarland
Randall L. McKenzie
Carol B. McLaughlin
Glen T. Meade
Dominic J. Nardi
Dennis A. Noe
Daniel C. Ohly
Marjorie Z. Olds
Lewis R. Pasternak
U. S. Grant Peoples
Richard L. Posen
Mark D. Reutter
Martin R. Rewcastle
Charles P. Ries
William W. Robinson
Barry F. Rosen
Steven D. Ross
Alan I. Rubin
Gary R. St. Peter
James G. Salerno
Edmund Sambuco
Richard S. Schafler
Donald L. Schlenger
Thomas A. Schultz
Melvin A. Schwarz
Edward P. Shapiro
Robert M. Shapiro
Douglas M. Shepard
Kenneth J. Silverman
Jay E. Simkin
William J. Slotnik
Joseph D. Smith
Scott Snyder
James A. Solomon
Alan P. Spielman
Lambert Stammerjohn
Elfrida H. Steingaszner
Glenn H. Stevens
Leon Strauss
William J. Strizever
Robert L. Sufit
David K. Sykes
Peter A. Taves
William E. Triest
Fred M. Weinblatt
Howard O. Weissman
Edward L. Wender
Robert M. Wettstein
Robin M. Wood
Mark P. Zimmett

CANDIDATES FOR DEGREES

As of May 15, 1972

BACHELORS OF ARTS

in the Faculty of Arts and Sciences

James Michael Abrams, of North East, Md.
Eric B. Abramson, of Ardmore, Pa.
Howard Bruce Adler, of New York, N. Y.
Lawrence Elliott Adler, of Princeton, N. J.
John Gerald Albertines, of Timonium, Md.
Arnold Leon Alper, of Irvington, N. J.
Thomas Henry Amalong, of Flossmoor, Ill.
Tracy Brett Ambler, of Hartford, Conn.
Lee Cameron Amsler, of Wheaton, Md.
Robert Philip Anderson, of Palmetto, Ga.
Peter Donald Andreoli, Jr., of Pelham, N. Y.
Steven John Antinelli, of Worcester, Mass.
Richard Gary Appel, of Meriden, Conn.
George Louis Apple, of Harrisburg, Pa.
Richard James Archer, of McClean, Va.
Steven G. Asin, of Newark, N. Y.
Michael Joseph Asken, of York, Pa.
James Alan Avery, of Wilmette, Ill.
Barry Elliot Messner Bacharach, of Baltimore, Md.
Dean Richard Backstrom, of Warren, Pa.
Kenneth Martin Bakalar, of Englewood, N. J.
Kermit F. Baker, of Lansing, N. Y.
Ronald Kent Barndollar, of Loudonville, N. Y.
Gerald Joseph Bates, of Joliet, Ill.
Joseph Elliot Baum, of North Merrick, N. Y.
Richard Eric Bautze, of Sudbury, Mass.
Robert Henry Bear, of Kenmore, N. Y.
Shawn Christopher Beaty, of Atlanta, Ga.
Jeffrey Haines Beck, of Fort Lauderdale, Fla.
Daniel Bellin, of Rochelle Park, N. J.
James Roland Bennett, of Springfield, Mass.
Morris Hillel Berg, of Merrick, N. Y.
Michael Allan Berke, of Evanston, Ill.
Leonard Herbert Bers, of Salisbury, Md.
John A. Bertolatus, of Roselle, N. J.
Sean Russell Bleck, of Palo Alto, Calif.
Steven Eric Blizzard, of Baltimore, Md.
Perry Stanton Block, of Merion, Pa.
Joel Alan Blumenthal, of Roslyn Heights, N. Y.
Toni Ann Boettger, of Cambridge, Md.
Gary Solomon Bondi, of Baltimore, Md.
Eugene Albert Bonte, of Woonsocket, R. I.
Charles Wayne Bowers, of Silver Hill, Md.
Kenneth Myron Braunstein, of Walterboro, S. C.
Steven L. Bressler, of Clayton, Mo.
Bradley Allen Bringgold, of Edina, Minn.
Gene Wilbur Brown, of Baltimore, Md.
Leonard Reid Brown, Jr., of Washington, D. C.
Keith Robert Bucklen, of Lancaster, Pa.
Edward Stephen Buescher, of Silver Spring, Md.
Gary Brent Burgee, of Frederick, Md.
Alfred Ely Burk, Jr., of Timonium, Md.
Jonathan Harris Burroughs, of York, Pa.
Alvin Craig Burstein, of White Plains, N. Y.
David Jay Byer, of Fairlawn, N. J.
Colin Bruce Campbell, of Weston, Conn.
William Frederick Canis, of Elmira, N. Y.
Edwin Steven Carr, of Gloversville, N. Y.
Ira Michael Casher, of Dayton, Ohio
Jill Casner, of Staatsburg, N. Y.
David DuPuy Celentano, of Hyannis Port, Mass.
Chi-Chao Chan, of Hong Kong
Eugene Bing Chang, of Princeton, N. J.
Robert Earl Chapman, of Pittsburgh, Pa.
David Leslie Cherwitz, of Davenport, Iowa
Hugh Benton Chodosh, of Carteret, N. J.
Joseph S. Cieslowski, of Savage, Md.
Ted Robert Cmarada, of Clairton, Pa.
Helene Barbara Cohen, of Flushing, N. Y.
Thomas Warren Cooper, of Teaneck, N. J.
William Joseph Cotter, Jr., of Fairfax, Va.
Geoffrey Arthur Crenson, of Baltimore, Md.
Louis Selby Crouch, of Stevensville, Md.
Tomlin Peacock Crowder, of Washington, D. C.
Edward Mark Cummings, of Honolulu, Hawaii
Edward Richard Cummings, of Livorno, Italy
Robert Cummings, Jr., of Baltimore, Md.
Lawrence Michael Curcio, of Philadelphia, Pa.
John Bernard Curry III, of Belchertown, Mass.
William Harris Dale, of South Portland, Maine
George William Dalphon, Jr., of Wilmington, Del.
Michael David Danly, of River Forest, Ill.
Wesley Roy Daub, of Hanover, Mass.
John Thomas Daugirda, of Sykesville, Md.

Barry Michael Davidoff, of Harrington Park, N. J.
Gregg Randal Davis, of Colorado Springs, Colo.
Irving Chase Decatur III, of Melrose, Mass.
Bruce Alan Deerson, of Flushing, N. Y.
Richard David deFuria, of St. Davids, Pa.
Wayne Thornton De Jarnette, of Baltimore, Md.
Octavio J. de Marchena, of Cockeysville, Md.
Mark Burgess Derr, of Longwood, Fla.
James Christian Dewald, of Baltimore, Md.
Richard Laroy Dietrich, of Coral Gables, Fla.
George Michael DiIanni, of Medford, Mass.
Alfred Daniel Dimiero, of South Orange, N. J.
John Daniel Diorio, of Schenectady, N. Y.
Jerry Louis Doctrow, of Harrisburg, Pa.
Robert Ernest Doherty, of Cherry Hill, N. J.
Michael Aristides Doukas, of Bethesda, Md.
Lance Torrey Downing, of Morristown, N. J.
Larry O. Doyle, of Louisville, Ky.
William Whitley Drain, of Washington, D. C.
Howard Lee Drescher, of Colonia, N. J.
William Edgar Duncan, of Bethesda, Md.
Christopher James Dunford, of Rye, N. Y.
Michael Robert Dunn, of Wichita, Kans.
Thomas L. Duvall, Jr., of Carnegie, Pa.
Patricia Ann Ebener, of Silver Spring, Md.
James Steven Economou, of Wilmette, Ill.
Howard Henry Edelman, of Bethel Park, Pa.
Edward Ernest Eder III, of Panama, Republic of Panama
Thomas Hemmeter Eirich, of Baltimore, Md.
Daniel Bernard Epstein, of La Paz, Bolivia
Michael Paul Eriksen, of Whippany, N. J.
David Charles Etter, of Dayton, Ohio
William John Evans, Jr., of Wilmington, Del.
Willie James Ewing, of Ayer, Mass.
Richard Joseph Fastiggi, of Verona, N. J.
Kenneth Howard Fife, of Logansport, Ind.
Jack Eugene Fischer, of Cincinnati, Ohio
Richard Adam Fischer, of North Merrick, N. Y.
Andrew David Fisher, of South Orange, N. J.
John Jacob Fisher III, of Mandarin, Fla.
Melanie Hope Fishkind, of Adelphi, Md.
Kevin Michael Fitzgerald, of Rockville, Md.
Stephen Pullen Fix, of Baltimore, Md.
Louis Edward Flaig III, of Severna Park, Md.
Anthony Edward Flora, of Massapequa, N. Y.
Mark David Forester, of Weston, Conn.
Vincent Ferdinando Forte, of Newton, Mass.
Alfred Lee Foster, of Memphis, Tenn.
David Robert Fox, of Baltimore, Md.
Mitchell Alan Frank, of White Plains, N. Y.
Howard Mark Fried, of Baltimore, Md.
Robert Michael Friedman, of Eastchester, N. Y.
Douglas Henry Fuchs, of Manhasset, N. Y.
Philip Edward Gallagher, of Clarion, Pa.
Neal James Gallico, of Ridgewood, N. J.
Robert Wayne Garnet, of Lincroft, N. J.
Alan Lloyd Gelb, of Scarsdale, N. Y.
James Eldred Gentry, of Lakewood, Ohio
Donald Edward George, of Buffalo, N. Y.
Bruce Neal Gerber, of Baltimore, Md.
Elder Antiiony Ghigiarelli, Jr., of Glen Burnie, Md.
Mark Gilbert, of New York, N. Y.
Ronald Lewis Gilbride, of Algona, Iowa
John Robert Gober, of Hyattsville, Md.
Carl Jeffrey Goldberg, of West Orange, N. J.
Larry Philip Goldberg, of Leominster, Mass.
David Banks Goldenberg, of West Hartford, Conn.
Steven Charles Goldman, of New York, N. Y.
Jack N. Goodman, of Greensboro, N. C.
Robert Paul Goodman, of Richmond, Va.
Darrell Mason Gray, of Baltimore, Md.
Stephen Joseph Gray, of Washington, D. C.
Marvin H. Greenbaum, of Wynnewood, Pa.
David B. Greenberger, of Teaneck, N. J.
David Nathan Greenblum, of Stamford, Conn.
Paul Arthur Greene, of Brooklyn, N. Y.
Peter Kim Gregersen, of Englewood, N. J.
James Peter Grenafege, of Huntington Station, N. Y.
David Arnold Griesemer, of Salt Lake City, Utah
Harold David Grinberg, of Pittsburgh, Pa.
Earl Wayne Grogan, Jr., of Rockville, Md.
Norman Charles Gross, of New York, N. Y.
Sanford Mark Gross, of Brooklyn, N. Y.
Glenn Milo Grossman, of New York, N. Y.
William Howell Grover, of Norfolk, Va.
Kurt Thomas Grozinger, of Longview, Texas
Lyle Foxwell Gulley, Jr., of St. Louis, Mo.
Herbert Raymond Haar III, of Alexandria, Va.
Barry Lewis Hainer, of Massapequa, N. Y.
Russell Ernest Haines, of Palmyra, N. J.
Stephen Wallace Haines, of Eaton Rapids, Mich.
Robert William Hall, of Des Moines, Iowa
Robert Francis Hamilton, of Baltimore, Md.
Robert Merle Hamilton, of Baltimore, Md.
Mark Gary Handleman, of Baltimore, Md.
Jeffrey Perrin Hanes, of Westminster, Md.
Daniel Mark Harris, of Chicago, Ill.
Glenn Douglas Hartmann, of Brookside, N. J.
David Morris Hashmall, of Great Neck, N. Y.
David Eugene Haupt, of Baltimore, Md.
Creighton Evans Hays, of Baltimore, Md.
James Losson Head, Jr., of Massapequa, N. Y.
Peter David Wendell Heberling, of Maitland, Fla.
Foster Hebert, of New Orleans, La.
Richard Arnold Heddleson, of Wayne, Pa.
Paul Ely Henderson, of Riverside, Calif.
William Rodney Henderson, of Houston, Texas
Eric Leroy Hildebrand, of Orange, Conn.
Albert Michael Hill, of Atlanta, Ga.
Mary Carol Jennings Hoffer, of San Diego, Calif.
Paul Norman Hollifield, of Lutherville, Md.

John Bengt Holmblad, of Mount Prospect, Ill.
Jeffrey Joseph Hondo, of Union, N. J.
Leslie Robynn Hood, of Baltimore, Md.
Kenneth Allen Hooker, of Leonia, N. J.
Steven Chester Horii, of South Orange, N. J.
Martin H. Horn, of Hyattsville, Md.
Howard Richard Hubbell, of Pittsburgh, Pa.
Keith Lowell Hull, Jr., of Battle Creek, Mich.
Barbara Anne Hutcheson, of Annandale, Va.
James Neal Hutchinson, Jr., of Neptune Beach, Fla.
Michael Ken Imura, of Honolulu, Hawaii
Sarah Dixon Isaacs, of Baltimore, Md.
Robert Jonathan Ivry, of Storrs, Conn.
Peter Scott Jablon, of Great Neck, N. Y.
Thomas Warren Jackson, of Hagerstown, Md.
Robert Joseph Kassel Jacob, of Brooklyn, N. Y.
Andrew Craig Jacobs, of Mt. Vernon, N. Y.
Gary Edward Jasper, of Baltimore, Md.
Hollis Jenkins, of New York, N. Y.
Ian William Jewitt, of Melbourne, Australia
Carroll Randolph Johnson, Jr., of Baltimore, Md.
Daniel Webb Johnson, of Manassas, Va.
Jimmie Lee Johnson, of Teachey, N. C.
Keith Phillip Johnson, of Glen Burnie, Md.
Kevin Thomas C. M. Johnson, of Massapequa Park, N. Y.
George W. Johnston, of Cazenovia, N. Y.
Bruce Stephen Jonas, of Baltimore, Md.
Ian Calder Jones, of Parkton, Md.
Larry Albert Jones, of Memphis, Tenn.
Russell Cornish Jones, of Houston, Texas
Elwyn Monroe Jordan, of Rochester, N. Y.
Sheldon Emanuel Jordan, of Brooklyn, N. Y.
Emerson Richelieu Julian, Jr., of Baltimore, Md.
Andrew Henry Kahn, of Wantagh, N. Y.
Steven Martin Kane, of Gastonia, N. C.
Frederick Samuel Kaplan, of Highland Paak, N. J.
Richard Marc Kaplan, of Lawrence, N. Y.
Jeffrey A. Katz, of New York, N. Y.
Gary Steven Kelly, of Baltimore, Md.
Mark Alan Kessler, of East Meadow, N. Y.
George Liang King, of Richmond, Va.
Lucy Margaret Kirkman, of Darien, Conn.
Marvin Eli Kirsh, of Baltimore, Md.
Thomas James Knight, of Anniston, Ala.
Kathryn Ann Koch, of Bloomington, Ind.
Raymond William Koch, of Garden City, N. Y.
Jeffrey Hugh Koenig, of Poughkeepsie, N. Y.
Mitchell Lewis Kornblit, of Great Neck, N. Y.
Alison Victor Kothe, of Zionsville, Ind.
Stephen Kottler, of Augusta, Maine
James Christopher Kozlowski, of Philadelphia, Pa.
Muriel Mahon Kratz, of Vicksburg, Miss.
Kevin John Kresock, of Springfield, Mass.
Abram Joel Kronsberg, of Charleston, S. C.
Isaiah Kuperstein, of Norwich, Conn.
John Albert Lally, of Greenbelt, Md.
James Francis Lasser, of Scarsdale, N. Y.
Michael Charles Lauren, of Great Neck, N. Y.
Mary R. Lemon, of Baltimore, Md.
Michael Alan Lerner, of Brooklyn, N. Y.
William Jay Lesner, of Lawrence, N. Y.
Howard Stanley Levenson, of Quincy, Mass.
Arthur Steven Levine, of Great Neck, N. Y.
Andrew William Levinson, of Great Neck, N. Y.
Barry Edward Levy, of Baltimore, Md.
Thomas Edward Levy, of Biloxi, Miss.
Morgan Rhys Lewis, Jr., of Baltimore, Md.
Todd Ming Chun Li, of Glen Cove, N. Y.
Samuel M. Libber, of Kensington, Md.
Harvey Anton Licht, of New York, N. Y.
Robert Henry Lindauer, Jr., of Simsbury, Conn.
William Henry Linder, of Scarsdale, N. Y.
Douglas Brian Lipman, of Jamaica Plain, Mass.
John Richard Lipsey, of Tokyo, Japan
Michael Harvey Long, of Maitland, Fla.
George Mark Loreto, of Whippany, N. J.
Michael R. MacAdams, of Lambertville, Mich.
Bruce Joseph MacPherson, of Friendly, Md.
Phyllis Magram, of Silver Spring, Md.
Haynes Richardson Mahoney III, of Washington, D. C.
Thomas James Mahoney, of Indian Orchard, Mass.
Donald S. Maier, of Paramus, N. J.
Clifford Luke Malanowski, Jr., of Baltimore, Md.
Geoffrey Edmund Margrave, of Washington, D. C.
Neil Jay Markwith, of Haddonfield, N. J.
David Vance Marshall, of Oakton, Va.
David Albert Martin, of Beaver, Pa.
Rodney Carrington Mason, of Ashton, Md.
Wayne Charles Matus, of Lido Beach, N. Y.
Charles Wayne Maxson, of Severna Park, Md.
Jonathan Waldron McAdams, of Columbia, Md.
Eugene James McBride, of McKeesport, Pa.
Craig Lee McClure, of Stamford, Conn.
Charles Henry McComas III, of Bel Air, Md.
Richard Warren McDonnell, of Kansas City, Mo.
John Patrick McDonough, of Hyattsville, Md.
Paul Edward McFarland, of Williamstown, Mass.
Richard Stansbury McKenna, of Massapequa, N. Y.
Randell L. McKenzie, of Abilene, Texas
Carol Brent McLaughlin, of Arlington, Va.
William Kevin McQueeney, of Boston, Mass.
Thomas Allan McVicker, of Monongahela, Pa.
Glenn Thomas Meade, of Mesa, Ariz.
Jon Constantino Meccarello, of Poughkeepsie, N. Y.
Leo Meire, of Glimp, Nebr.
Thomas Joseph Merimee, Jr., of Newton, Mass.
John R. Mikolich, of Youngstown, Ohio
Paul Victor Minotty, of Franklinville, N. J.
Robert Jordan Moreland, of Olympia Fields, Ill.
John James Moriarty, of Andover, Mass.
Anne Clayton Mountcastle, of Sparks, Md.

Christopher George Moyer, of North Wales, Pa.
Timothy D. Murphy, of Baltimore, Md.
Vernon Buchheit Myers, of Rockville, Md.
Richard Laird Nace, of Kingsville, Md.
Gene Stewart Nagler, of Brooklyn, N. Y.
Dominic Jerry Nardi, of Springfield, Mass.
Steffi Ruth Nason, of Baltimore, Md.
Leo Sol Nechamkin II, of Baltimore, Md.
Joseph Allen Neesan, of Iselin, N. J.
David Allen Nelz, of Dix Hills, N. Y.
Paul Kurtz Newlin, of Wyomissing, Pa.
Adrienne Sandra Noble, of Rowayton, Conn.
Dennis Alan Noe, of San Antonio, Texas
Colegate Sheldon Nuttle, of Baltimore, Md.
Christine Helen Nye, of Harrisburg, Pa.
Francis Edward O'Donnell, Jr., of St. Louis, Mo.
Daniel Christopher Ohly, of Brooklyn, N. Y.
Marjorie Ruth Zagoria Olds, of College Park, Md.
Lynne Marla Ostroff, of Philadelphia, Pa.
Mark Alan Ozark, of Edgewood, Pa.
Robert Walter Ozarowski, of Baltimore, Md.
Robert Aubrey Parsley, of Miami, Fla.
Eric Dorsey Partridge, of New Orleans, La.
Lewis Reuven Pasternak, of Hempstead, N. Y.
Samuel Allen Peal, of Washington, D. C.
U. S. Grant Peoples III, of Emerson, N. J.
James Kendall Phelps, of Kendall Park, N. J.
Jeffrey Charles Pingpank, of Darien, Conn.
Charles Leonard Pinsky, of Scarborough, N. Y.
Jerome Orville Pitt, of Trenton, N. J.
Daniel Bruce Polin, of Elkins Park, Pa.
Eugene Anthony Pometto, Jr., of College Park, Md.
Richard L. Posen, of Great Neck, N. Y.
Paul Kodjo Prah, of Mpohor, Ghana, West Africa
Randall Nicoll Pratt, Jr., of Claymont, Del.
Robert Mark Price, of Wantagh, N. Y.
Edward Victor Prochownik, of Buffalo, N. Y.
Liam Oliver Purdon, of Cold Spring Harbor, N. Y.
Stephen Alan Ramming, of Fort Wayne, Ind.
Robert John Rappold III, of Dundalk, Md.
Jack Howard Rapport, of Massapequa Park, N. Y.
William Frederick Raskob III, of Albuquerque, N. M.
Carol Jane Renneburg, of Baltimore, Md.
Mark D. Reutter, of Emerson, N. J.
Martin Ralph Rewcastle, of Goudhurst, Kent, England
Charles Parker Ries, of Kailua, Hawaii
Charles Edwin Riggs, Jr., of West Palm Beach, Fla.
William McKinley Ringle, of McLean, Va.
Ingram Mark Roberts, of Bethesda, Md.
William Walker Robinson, of Pelham, N. Y.
Gordon Richard Rode, of Rahway, N. J.
Frank Linck Roediger, of Glen Head, N. Y.
Alan Hyman Rolnick, of Newburgh, N. Y.
Barry Fredric Rosen, of Scarsdale, N. Y.
Jeffrey David Rosenbaum, of New York, N. Y.
William S. Rosenberg, of Trumbull, Conn.
Richard Edwin Rosenthal, of Woodmere, N. Y.
Melvin Paul Rosenwasser, of Walden, N. Y.
Keith Dunn Ross, of Bethesda, Md.
Steven David Ross, of Austin, Texas
Alan Ira Rubin, of Flushing, N. Y.
Bertram Royce Russell, Jr., of Rosemont, Pa.
John Francis Ryan, of Rockaway Park, N. Y.
Robert Harold Sadowsky, of Baltimore, Md.
James George Salerno, of Kearny, N. J.
Edmund Sambuco, of Catonsville, Md.
David Gill Sandberg, of New York, N. Y.
Steven Kent Sarau, of Columbia, Md.
Richard Todd Sarkin, of Hillside, N. J.
Eugene Michael Sarno, of Lake Mills, Iowa
Leonard Steven Sass, of Enfield, Conn.
Stuart Edward Savanuck, of Baltimore, Md.
Richard Scott Schafler, of New York, N. Y.
Myron Paul Schamis, of Forest Hills, N. Y.
Philip A. Schechter, of Northbrook, Ill.
Laurence Howard Scheidle, of Media, Pa.
Carlos Hugh Schenck, of New York, N. Y.
Jeffrey Herman Scherr, of Baltimore, Md.
John Brian Schoppert, of Baltimore, Md.
Richard Jay Schwartz, of Scranton, Pa.
Melvin Alfred Schwarz, of Cincinnati, Ohio
Stuart Arthur Seidel, of Baltimore, Md.
Michael Max Selikowitz, of Glen Rock, N. J.
Douglas Drake Seward, of Wappingers Falls, N. Y.
Edward Paul Shapiro, of Flushing, N. Y.
Robert Moses Shapiro, of Baltimore, Md.
Douglas Mitchell Shepard, of Englewood Cliffs, N. J.
Kenneth Charles Shepro, of LaGrange Park, Ill.
Kathryn Lambdin Sheridan, of Jacksonville Beach, Fla.
Charles William Shivery, of Millington, Md.
Raymond Calistus Short, Jr., of Bridgeville, Del.
Stephen William Shriver, of Manheim, Pa.
Lynn Barbara Shteir, of Freehold, N. J.
John Lucas Shultz, of Arlington, Va.
Marcia Rochelle Silver, of Baltimore, Md.
Richard Barry Silver, of Baltimore, Md.
Kenneth Jay Silverman, of Rochester, N. Y.
Jay Edward Simkin, of Baltimore, Md.
Robert Steven Singer, of Brooklyn, N. Y.
Lamin Jalamang Sise, of The Gambia, West Africa
William Joseph Slotnik, of Newton, Mass.
Daryl Smiley, of New York City, N. Y.
Daniel Stuart Morse Smith, of Wilmington, Del.
Gregory Allgire Smith, of Washington, D. C.
Joseph David Smith, of Woodbury, N. J.
Michael Coleman Snead, of Frederick, Md.
Steven Lee Snively, of Denver, Colo.
Steven Earl Snow, of Cranston, R. I.
Scott Snyder, of Philadelphia, Pa.
Marc Charles Sober, of Baltimore, Md.
James Alan Solomon, of Norwalk, Conn.
Mark Halstead Spencer, of Darien, Conn.

Alan Paul Spielman, of Neptune, N. J.
William C. Spratt, of Fredericksburg, Va.
Thomas Haynes Steenland, of Englewood, N. J.
James Joshua Steinberg, of Palo Alto, Calif.
Elfrida Helen Steingaszner, of Baltimore, Md.
Leslie Robert Stellman, of Glendale, Wis.
Barry Sheldon Stendig, of Monsey, N. Y.
Glenn Howard Stevens, of Plainview, N. Y.
James Allen Stewart, of Baltimore, Md.
Dennis Ray Stone, of Hollywood, Fla.
Thomas Anthony Stout, of Timonium, Md.
Gary Robert St. Peter, of Springfield, Mass.
Leon Strauss, of Owings Mills, Md.
Barbara Gervais Street, of Charleston, S. C.
William Jay Strizever, of Brooklyn, N. Y.
Lang Stocker Sturgeon, of Foxboro, Mass.
Robert Louis Sufit, of Arlington, Va.
Soll Alfred Sussman, of West Hartford, Conn.
John Richard Swanson, of Newark, Del.
David K. Sykes, of Baltimore, Md.
Robert Gene Szeles, of New Brunswick, N. J.
Peter Allen Taves, of Laurel, Md.
Ronald David Taylor, of Baltimore, Md.
Beverly James Teel, of Baltimore, Md.
Norman Richard Thom, of Boulder, Colo.
Gregory Lee Thomas, of New York, N. Y.
Larry Alan Thompson, of Norfolk, Va.
Robert J. Thompson, of West Chester, Pa.
Wayne George Towns, of Pittsburgh, Pa.
Elliott Robin Treby, of Bay Shore, N. Y.
William Edward Triest, Jr., of Poughkeepsie, N. Y.
Steven Lee Utz, of Bel Air, Md.
Michael Baxter Vincenti, of Prospect, Ky.
Martin Alexander Carel Vogel, of Eugene, Oreg.
Robert Friste Vogt, Jr., of Albany, Ga.
Rainer Oliver von Saleski, of Reisterstown, Md.
Ralph Franklin Wachter, of Frederick, Md.
Yueh-Wen Wang, of Honolulu, Hawaii
Steven Gary Warm, of West Deal, N. J.
Mark Jerome Warns, of Arlington Heights, Ill.
Robert Neil Warren, of Stamford, Conn.
Ellis Archer Wasson, of Rosemont, Pa.
Everett Bell Waters, Jr., of Pompano Beach, Fla.
Howard C. Weaver, of Anchorage, Alaska
David Allan Weidner, of Pittsburgh, Pa.
Howard Norman Weinberg, of Latham, N. Y.
Fred Martin Weinblatt, of Baltimore, Md.
Eric Joel Weiner, of Newton Centre, Mass.
Robert Paul Weiner, of New Haven, Conn.
Howard Owen Weissman, of Woodbridge, N. J.
Edward Lawrence Wender, of Pittsburgh, Pa.
Robert Mark Wettstein, of Spring Valley, N. Y.
Maurice James Whalen, of Massena, N. Y.
Robert Dennis White, of Buchanan, Mich.
Edwin Habecker Wiest, of Hershey, Pa.
Gregory Stephen Wiles, of Des Moines, Iowa
Clara Josting Witt, of Chicago, Ill.
Craig Gilbert Wolfson, of White Plains, N. Y.
Larry Allen Wolk, of Oreland, Pa.
Scott Andrew Wolpert, of Wilmington, Del.
Rita Wondrak, of Chicago, Ill.
Kamehameha Kai-Min Wong, Jr., of Timonium, Md.
Robin Mark Wood, of Lake Park, Fla.
Wayne David Woodward, of Baltimore, Md.
Barbara Darrelle Wyche, of Hopewell, Va.
Bruce Allen Yarus, of Emmaus, Pa.
Andrew Michael Yeager, of East Orange, N. J.
Stephen Philip Yeagle, of Wilmington, Del.
Christopher Francis Zabawa, of Belleville, Ill.
Robert A. Zalutsky, of Pittsfield, Mass.
William Wilbur Zepp, of Sykesville, Md.
Mark Paul Zimmett, of Highland Park, Ill.
Jeffrey Leonard Zitsman, of Springfield, Ohio
Kenneth Murray Zonies, of Pennsauken, N. J.

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BACHELORS OF ENGINEERING SCIENCE

in the Faculty of Arts and Sciences

Charles Alphonsus Backof, Jr., of Baltimore, Md.
Michael Owen Ball, of Washington, D. C.
Eric Stephen Bergofsky, of Baltimore, Md.
Colin Cline, of Leonardtown, Md.
Kirk Lindsay Dancy, of Baltimore, Md.
Jonathan A. Dantzig, of Baltimore, Md.
Robert Lee Dennison, of Washington, D. C.
John Edward Duker, III, of Mountain Lakes, N. J.
Donald Edwin Gibson, of Oxford, Md.
Gerard Paul Gray, of Baltimore, Md.
Peter Bernard Heilker, of Towson, Md.
Mark Warren Hill, of Baltimore, Md.
Steven Neal Hirsch, of Baltimore, Md.
David Starr Hofmann, of Baltimore, Md.
Mark H. Houck, of Baltimore, Md.
Stephen Ernest Hutton, of Baltimore, Md.
Tom Nick Karras, of Baltimore, Md.
Kirk Ralph Karwan, of Cleveland, Ohio
Robert John Kelley, of Yorktown Heights, N. Y.
Douglas Edward Kelner, of Morrisville, Pa.
Thomas Anthony King, of Ellicott City, Md.
Dennis Joseph Lanahan, of Baltimore, Md.
Stephen Earl Lawhorne, of Savannah, Ga.
John Stuart Lipton, of Baltimore, Md.
William Edward Little, Jr., of Baltimore, Md.
Michael Craig Malloy, of Cumberland, Md.
David Crockford McGaw, of Wheaton, Md.
Eskandar Noorani, of Baltimore, Md.
Stephen Gene Pearre, of Baltimore, Md.
William Ditlow Pierson, of Eliot, Maine
Robert Louis Powell, III, of Nottingham Village, Md.
Henry Norman Robey, Jr., of Baltimore, Md.
William Lawrence Robinson, of Raleigh, N. C.
John Walter Rogenmuser, III, of Drexel Hill, Pa.
John Gerard Romanski, of Kingsville, Md.
Donald Lee Schlenger, of Baltimore, Md.
Thomas Arnold Schultz, of Walnut Creek, Calif.
Robert L. Sirian, of Baltimore, Md.
Lambert Walther Stammerjohn, Jr., of Allentown, Pa.
Gary Richard Stoneburner, of Denver, Colo.
George Wishard Turner, of Baltimore, Md.
Ira Jeff Turshen, of Elmont, N. Y.
Scott Andrew Tyner, of Baltimore, Md.
Stephen Lawrence VanDoren, of Chuckatuck, Va.
Peter Carl Weiss, of Westfield, N. J.
Edward Michael Wysocki, Jr., of Baltimore, Md.

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ASSOCIATE OF ARTS

in The Evening College

Eleanor Sutherland, of Baltimore, Md.

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ASSOCIATES OF SCIENCE

in The Evening College

Robert Eugene Barker, of Baltimore, Md.
Michael Anthony Brennan, of Baltimore, Md.
Joseph Michael Catalano, of Reisterstown, Md.
Donald Charles Culver, of Baltimore, Md.
Joseph Gerard Dobry, of Baltimore, Md.
Edwin Jackson Geisendaffer, of Fallston, Md.
Stanley Joseph Glinka, of Glen Burnie, Md.
William Warren Keating, Jr., of Baltimore, Md.
George Louis Kotrosa, Jr., of Baltimore, Md.
Robert Erwin McMorran, of Timonium, Md.
Edward Jacob Smith, of Baltimore, Md.
Roland Sterling Turcott, of Baltimore, Md.
Robert Charles Windham, of Baltimore, Md.

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BACHELORS OF SCIENCE

in The Evening College

Carolyn Ayers Adkins, of Columbia, Md.
William Cornelius Alexander, Jr., of Baltimore, Md.
Karen Marie Allen, of Baltimore, Md.
Joan Ursula Applestein, of Baltimore, Md.
James William Archer, of Baltimore, Md.
Irene Boguslavskis Are, of Baltimore, Md.
Demetra Bahadouris, of Baltimore, Md.
Arden Eugene Baughman, of Baltimore, Md.
Ronald Paul Belbot, of Baltimore, Md.
Lunsford Emory Bennett IV, of Baltimore, Md.
Thomas James Bevans, of Ellicott City, Md.
Kenneth Alan Borig, of Baltimore, Md.
John Gustave Bourgeois, Sr., of Baltimore, Md.
Donald Harry Branflick, of Baltimore, Md.
Carol Cohen Caplan, of Baltimore, Md.
Ulla Widmann Chapin, of Los Angeles, Calif.
George Edward Crowley, of Lutherville, Md.
Howard Dachs, of Brooklyn, N. Y.
Margaret Kann Danner, of York, Pa.
Wilson Scott Davis, Jr., of Fallston, Md.
Doris Poehler Denton, of Baltimore, Md.
Edward Elliott DePrine, of Lutherville, Md.
Carol Monish Dick, of Beltsville, Md.
Harris Matthew Dolan, of York, Pa.
Robert Bruce Charles Dorsey, of Baltimore, Md.
Minerva Ferguson Eades, of Baltimore, Md.
Martha Critchfield Eareckson, of Baltimore, Md.
Wanda Jaskowiak Edwards, of Baltimore, Md.
Harry Cole Eichelberger, of Baltimore, Md.
Joseph Edward Elligson, of Baltimore, Md.
Russell Charles Erb, of Baltimore, Md.
Rosalie Littlepage Craven Evans, of Severna Park, Md.
Richard Martin Farrell, of Baltimore, Md.
Diane Mallalieu Friedel, of Bel Air, Md.
Carol Victoria Friedman, of Baltimore, Md.
Quentin James Froelich, of Reisterstown, Md.
Penelope Miller Fuller, of Baltimore, Md.
Charles McDowell Gillan, Jr., of Baltimore, Md.
Sara Lynn Glass, of Baltimore, Md.
Hugh John Gribben, of College Park, Md.
Ronald James Gutowski, of Baltimore, Md.
Sabina Sitzamer Haar, of New York, N. Y.
Shirley Louise Hall, of Baltimore, Md.
Robert James Hammen, of Bel Air, Md.
Philip J. Hardy, of Baltimore, Md.
Janet Moyle Harryman, of Arnold, Md.
Mona Morrow Hartz, of Baltimore, Md.
Paul Charles Hawkins, Jr., of Glen Burnie, Md.
William Frederick Heckner, of Baltimore, Md.
Ellen Moses Heller, of Baltimore, Md.
Albert Paige Hickman, of Baltimore, Md.
Sylvia Hornstein Hirsh, of Baltimore, Md.
Frank Kwan-Tong Hom, of Baltimore, Md.
Andrew Jay Howell, of Port Deposit, Md.
Marion Wright Jervey, of Baltimore, Md.
Estella Virginia Johnston, of Denver, Colo.
Rhae Emerson Kelley, of Baltimore, Md.
Hall Albro Kellogg, of Reisterstown, Md.
Wayne Edward King, of Baltimore, Md.
Robert Andrew Koch, of Baltimore, Md.
Cynthia L. Koonce, of Glenelg, Md.
Mary Chambers Kroft, of York, Pa.
Albert Edward Kukla, of Wilkes-Barre, Pa.
Raymond Jerard Kulwicki, of Reisterstown, Md.
Richard Anthony Lagana, of Hazleton, Pa.
Daniel Shaw Lankford, of Baltimore, Md.
Charles Vernon Leach, of Baltimore, Md.
Edward George Leimbach, of Pasadena, Md.
Barbara Geraldine Hunt Logan, of Baltimore, Md.
Jack Lowenthal, of Baltimore, Md.
Roland Louis Lowman, of Severn, Md.
Garth R. MacKenzie, of Glen Burnie, Md.
Gary Edward Mansperger, of Baltimore, Md.
Gregory Marvenko, of Baltimore, Md.
Wayne Winfree Matthai, of Baltimore, Md.
Carol E. Dobles Matusky, of Minersville, Pa.
James Andrew Mayhew, Jr., of Baltimore, Md.
Mary Katherine Melville, of Baltimore, Md.
Chaim Joseph Milikowsky, of Baltimore, Md.
Doris McClure Moos, of Towson, Md.
Dennis Anthony Morgan, of Baltimore, Md.
William Frederick Morris, of Baltimore, Md.
Robert Claude Mullen, of Linthicum, Md.
Robert Oscar Mumper, of Baltimore, Md.
Kenneth Paul Murdock, of Pasadena, Md.
John Allen Nicodemus, of Baltimore, Md.
Fran Curva Northrup, of Baltimore, Md.
James Peter Ocque, of Greenbelt, Md.
Dorothy Frances Olszewski, of Baltimore, Md.
Glenn Eugene Palmer, of Shrewsbury, Pa.
Jonathan Patz, of Baltimore, Md.
Raymond Joseph Peluso, of Baltimore, Md.
James Edward Pfeiffer, of Baltimore, Md.
Myron Plaut, of Washington, D. C.
Roger Charles Poore, of Timonium, Md.
John Joseph Purcell, of Reisterstown, Md.
Jerry Queen, of Joppa, Md.

Wolfram Radloff, of Baltimore, Md.
Andrew McKenzie Rayne, of New Carrollton, Md.
Sarah Saunders Reeder, of Baltimore, Md.
Kenneth Jacob Reese, of Baltimore, Md.
Rosalind Volotta Rivera, of Annapolis, Md.
Donald Hudson Roane, of Baltimore, Md.
Thomas Anthony Romanko, of Baltimore, Md.
Lamar Kenneth Rybak, of Baltimore, Md.
Arthur Gordon Sachs, of Baltimore, Md.
Donald Reid Sanner, of Reisterstown, Md.
Robert William Shenton, of Baltimore, Md.
Frank Siegel, of Baltimore, Md.
Joseph Francis Siekierski, of Baltimore, Md.
Thomas Simms, of Washington, D. C.
Jack Clark Slates, of Baltimore, Md.
Rachel D. Smoller, of Baltimore, Md.
Clarence Donald Spedden, of Towson, Md.
Norman Sylvester Stewart, of Ellicott City, Md.
Gregory Lynn Stottlemyer, of Mt. Lena, Md.
James Mervin Sudduth, of Joppa, Md.
Anne Love Thomas, of Baltimore, Md.
George Frederick Troy, of Lutherville, Md.
Lynn Wesley Vosloh, of Greenbelt, Md.
James Andrew Wage, of Baltimore, Md.
Jo Ann Lois Sladics Walchli, of Glen Burnie, Md.
Ronald Alan Walper, of Baltimore, Md.
Arthur Leroy Watson, of York, Pa.
Walter Albert Webb, of Towson, Md.
James John Webber, of Baltimore, Md.
William Franklin Weser, of Towson, Md.
Diane Jean White, of Baltimore, Md.
Paul Peter Wilkes, of Baltimore, Md.
David John Windisch, of Baltimore, Md.
Harold Frederick Wolfing, Jr., of Ellicott City, Md.
Robert Oliver Colt Worcester, of Baltimore, Md.
Carl Stephen Young, of Ferndale, Md.
James Rudolph Zavodny, Jr., of Baltimore, Md.
Samuel Alexander Zervitz, of Baltimore, Md.
John Robert Zukas, of Baltimore, Md.

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BACHELORS OF SCIENCE IN ENGINEERING

in The Evening College

Earl Ayres, of Baltimore, Md.
James Robert Baker, of Bel Air, Md.
Barry Lee Barger, of Silver Spring, Md.
Robert Gordon Bartenfelder, of Baltimore, Md.
Roger Milford Baumgartner, Jr., of Baltimore, Md.
Jerome Irvin Bien, Jr., of Ellicott City, Md.
Samuel Joseph Biondo, of Chevy Chase, Md.
James Marlyn Bishoff, of Baltimore, Md.
David Thomas Bissell, of Laurel, Md.
Ervin Carroll Blimline, of Baltimore, Md.
Casper Joseph Bocklage, Jr., of Baltimore, Md.
Robert Francis Bradford, of Ellicott City, Md.
Anthony Walter Brajevich, of Baltimore, Md.
Henry Philip Brauns, of Baltimore, Md.
Thomas Edward Brown, Jr., of Elk Ridge, Md.
Joseph Frederick Carroll, of Baltimore, Md.
John Nelson Cicone, of Baltimore, Md.
John Morgan Clayton III, of Forest Hill, Md.
Lester Lynn Cramer, of Johnstown, Pa.
Eduardo Oliveira Cunha, of Baltimore, Md.
David Fitzgerald Currie, of Baltimore, Md.
Anthony Joseph David, of Baltimore, Md.
Vernon Joseph Diggs, of Baltimore, Md.
Ronald Dean Distler, of Perry Hall, Md.
Gary John Emrhein, of Baltimore, Md.
Joseph Benjamin Ennis III, of Baltimore, Md.
Lawrence Gilbert Espenshade, of Silver Spring, Md.
Daniel Powell Evans, of Baltimore, Md.
William John Eveland, of Wilkes-Barre, Pa.
Thomas Newton Fischer, of Reisterstown, Md.
Clyde Oliver Fitzhugh, of Stafford, Va.
Bronnie Ray Frias, of Baltimore, Md.
John Edward Friedel, Jr., of Upper Marlboro, Md.
Norbert Raymond Gebhardt, of Baltimore, Md.
Leslie Arthur Gibson, of Sykesville, Md.
Donald Nelson Halgren, of Baltimore, Md.
John Joseph Hefner, of Randallstown, Md.
Raymond Edward Hein, of Baltimore, Md.
Donald Edwin Hicks, of Baltimore, Md.
Robert Encil Hicks, of Baltimore, Md.
John Howard Himes, of Baltimore, Md.
Carl Howard Hohenberger, of Baltimore, Md.
Robert Joseph Hohenberger, of Baltimore, Md.
Allen Clifford Howe II, of Baltimore, Md.
John Euel Hudgens, of Pasadena, Md.
Ronald Thomas Jackson, of Towson, Md.
Joseph Daniel Jeffords III, of Arbutus, Md.
Richard J. Johnson, of Baltimore, Md.
Edward Andrew Kaczmarek, of Baltimore, Md.
Leo Adam Kane, of Street, Md.
Andrew Michael Kaufman, of Glen Burnie, Md.
William Whidden Keys, Jr., of Woodstock, Md.
Dennis James Kline, of Baltimore, Md.
John Charles Lang, of Towson, Md.
Gerard Stanley Lipinski, of Baltimore, Md.
Joseph K. Love, of Randallstown, Md.

David Kenneth Loyd, of Fairfield, Calif.
Frank Julian Magina, of Columbia, Md.
Ernest Victor Marsh, of Springfield, Mass.
James Edwin Marthinuss, of Dundalk, Md.
Fielding Lucas Maurer, Jr., of Baltimore, Md.
Dilip Mayabhai Mehta, of Baltimore, Md.
Gerald Dean Metcalf, of Laurel, Md.
Charles Francis Meyers, of Baltimore, Md.
Frederick Otto Richard Miesterfeld, of Joppa, Md.
Paul Athanasius Milash, of Baltimore, Md.
Armin Francis Mohr, of Baltimore, Md.
Walter Wesley Morgan, of Fallston, Md.
Norvin Francis Myers, of Baltimore, Md.
Thomas Naugler, of Rockville, Md.
Gary William Nengel, of Forest Hill, Md.
Eugene Franklin Nerf, Jr., of Baltimore, Md.
John Andrew Neuberger, Jr., of Baltimore, Md.
Eldred Francis Newland, of Baltimore, Md.
William Everett Newland, of Glen Burnie, Md.
Robert Charles Nilson, of Kingsville, Md.
Robert Michael Novak, of Baltimore, Md.
David Charles Novotny, of Baltimore, Md.
Daniel Howard Overman, of Baltimore, Md.
Robert Leon Paulson, of Winter Haven, Fla.
Gary Albert Piepenbring, of Baldwin, Md.
Frederick Davis Rees, Jr., of Perry Hall, Md.
Michael John Richardson, of Baltimore, Md.
Gerald Kenneth Roach, of Baltimore, Md.
John Francis Robusto, of Baltimore, Md.
James Donald Rodgers, of Westminster, Md.
Carlos Efrain Rodriguez Pereda, of Baltimore, Md.
John Paul Rolfes, of Baltimore, Md.
Alan Richard Rosen, of Randallstown, Md.
Richard Albert Sands, Sr., of Baltimore, Md.
Robert Thomas Sava, of Laurel, Md.
James Duncan Scheder, of Baltimore, Md.
Harry Albert Schiller, of Baltimore, Md.
Martin William Schlining, Jr., of Baltimore, Md.
Joseph John Schreiber, Jr., of Baltimore, Md.
Thomas Emeron Seidel, of Elkridge, Md.
Richard Edgar Shamleffer, of Baltimore, Md.
Roger Lee Shook, of Timonium, Md.
Robert Anthony Silvestri, of Aliquippa, Pa.
Aubrey Charles Smith, of Baltimore, Md.
Robert Gray Spencer, of Arbutus, Md.
Thomas Watson Statham, of Cockeysville, Md.
Harry James St. Aubin, of Bowie, Md.
Thomas Philip Swift, of Baltimore, Md.
Mohammad Tahami, of Fairfax, Va.
Steven Tito Tammsaar, of Baltimore, Md.
John Martin Walker, of York, Pa.
John Joseph Walsh, Jr., of Glen Burnie, Md.
George Henry Weitzel, Jr., of Baltimore, Md.
Walter Wesley Wieners, of Baltimore, Md.
Howard Randall Wilhelm, of Baltimore, Md.
Thomas John Wilkins, of Baltimore, Md.
James Luchin Williams, of Baltimore, Md.
George Thomas Willingmyre, of Silver Spring, Md.
Albert Michael Wresh, of Fallston, Md.
David Carl Zaloudek, of Baltimore, Md.

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MASTERS OF SCIENCE

in The Evening College

John Reed Albertine, of Laurel, Md., B. S. Rose Polytechnic Institute, 1969. Applied Physics.

Gary Paul Anderson, of Aurora, Colo., B. S. E. E. Washington State University, 1965. Electrical Engineering.

Norig Garo Asbed, of Rockville, Md., M. S. E. The Johns Hopkins University, 1961. Numerical Science.

Richard Hamilton Bair, Jr., of Randallstown, Md., B. S. University of Maryland, 1967. Applied Physics.

Edward Keefer Baker, of Baltimore, Md., B. E. S. The Johns Hopkins University, 1969. Management Science.

Robert Louis Bard, of Baltimore, Md., B. E. S. The Johns Hopkins University, 1968. Space Technology.

Donald Curtis Bell, of Laurel, Md., B. S. E. E. University of Akron, 1970. Electrical Engineering.

Elsie Antoinette Blackshear, of Baltimore, Md., B. A. Hunter College, 1965. Management Science.

Jack Thomas Blackwell, of Manassas, Va., B. E. E. Rensselaer Polytechnic Institute, 1960; B. S. The Johns Hopkins University, 1968. Management Science.

Paul Franklin Bohn, Jr., of Hagerstown, Md., B. S. Carnegie Institute of Technology, 1961. Management Science.

Richard Allen Brumback, of Trenton, Mich., B. S. I. E. Wayne State University (Mich.), 1968. Management Science.

Eric Wayne Butler, of Glen Burnie, Md., B. S. E. E. The University of Nebraska, 1970. Electrical Engineering.

Steven John Clancy, of Baltimore, Md., B. S. E. The Johns Hopkins University, 1968. Electrical Engineering.

Alan Greene Clarke, of Lanham, Md., B. A. Cornell University, 1950. Electrical Engineering.

Charles Edward Collison III, of Baltimore, Md., B. S. C. E. University of Maryland, 1968. Management Science.

William Anthony Cooper, of Baltimore, Md., B. S. Loyola College, 1964. Electrical Engineering.

Charles Marshall Curtis, of Wallops Island, Va., A. B. Elon College, 1958. Space Technology.

Rex Davey, of Severna Park, Md., B. S. University of Southwestern Louisiana, 1951. Management Science.

Eugene William George David, of Laurel, Md., B. S. G. E. University of Illinois, 1969. Numerical Science.

Daniel Davis, of Baltimore, Md., B. S. E. E. Polytechnic Institute of Brooklyn, 1962; M. S. University of Akron, 1966. Electrical Engineering.

John Clair Davis, of Columbia, Md., B. S. Pennsylvania State University, 1961; M. S., 1962. Electrical Engineering.

William Omar Davis, of Baltimore, Md., B. S. Rensselaer Polytechnic Institute, 1961. Physics.

Evaluation of the Optical Transfer Function for Longitudinal Vibrations in the Presence of Static Defocusing.

David Allen De Hart, of Easton, Pa., B. S. University of Kansas, 1964. Electrical Engineering.

Nicholas De Minco, of Laurel, Md., B. S. E. E. Syracuse University, 1968. Electrical Engineering.

Allan Wayne DePrey, of Silver Spring, Md., B. E. E. Marquette University, 1963. Space Technology.

Robert Thomas Dewey, of Lanham, Md., B. S. Villanova University, 1968. Numerical Science.

Robert Leete Dhein, of Adelphi, Md., B. S. E. E. Worcester Polytechnic Institute, 1967. Electrical Engineering.

Marshall Dick, of Gaithersburg, Md., B. S. Massachusetts Institute of Technology, 1948; M. S. Georgetown University, 1961. Management Science.

Stephen Carroll Dolbey, of Salisbury, Md., B. S. E. The Johns Hopkins University, 1969. Electrical Engineering.

Thomas Steven Dominick, of Glen Burnie, Md., B. S. University of Pittsburgh, 1965. Electrical Engineering.

Robert Dean Estes, of Lenoir, N. C., B. S. E. E. North Carolina State of the University of North Carolina at Raleigh, 1966. Electrical Engineering.

Mark Ivan Farber, of Miami, Fla., B. S. University of Florida, 1969. Management Science.

Carl Norman Fauntleroy, of Hampton, Va., B. A. Hampton Institute, 1962. Computer Science.

Howard Steven Feldmesser, of Columbia, Md., B. S. E. E. Rutgers University, 1967. Electrical Engineering.

John Warren Feuerstein, of York, Maine, B. S. University of New Hampshire, 1967. Electrical Engineering.

Marshall Lee Field, Jr., of Baltimore, Md., B. E. E. Georgia Institute of Technology, 1969. Electrical Engineering.

Dennis David Fitzgerald, of Milford, Conn., B. S. Fairfield University, 1964; M. S. (Applied Physics) The Johns Hopkins University, 1971. Numerical Science.

Linda Carol Foley, of Laurel, Md., B. S. Ursinus College, 1970. Numerical Science.

William Edward Frain, of Ellicott City, Md., B. S. M. E. Bradford Durfee College of Technology, 1957. Numerical Science.

Edward Francis Frees, of Columbia, Md., B. S. Rutgers University, 1968. Electrical Engineering.

Bobby Joe Gatlin, of Baltimore, Md., B. E. Vanderbilt University, 1960. Numerical Science.

Russell Edward Gingras, of Lansing, Ill., B. S. University of Illinois, 1969. Electrical Engineering.

Michael I. Green, of Laurel, Md., A. B. Boston University, 1969. Numerical Sciece.

Stephen Frederic Haase, of Columbia, Md., B. S. Massachusetts Institute of Technology, 1968. Electrical Engineering.

Raymond James Harrington, of Reisterstown, Md., B. S. E. The Johns Hopkins University, 1967. Electrical Engineering.

William Edward Hatch, of Annandale, Va., B. S. E. E. Northeastern University, 1963; M. S. E. E., 1965. Management Science.

Lincoln Loring Hayes, of Laurel, Md., B. A. Bowdoin College, 1967. Computer Science.

Robert Joseph Husson, of Beltsville, Md., B. A. University of Notre Dame, 1967. Computer Science.

John Edward Jelen, of Odenton, Md., B. A. La Salle College, 1968. Numerical Science.

Robert Kenneth Jones, of Columbia, Md., B. S. E. The Johns Hopkins University, 1969. Space Technology.

Thomas Edwin Keast, of Laurel, Md., B. E. S. The Johns Hopkins University, 1969. Management Science.

Mark Charles Kerstetter, of Philadelphia, Pa., B. A. La Salle College, 1968. Numerical Science.

Gene Raymond Kolnowski, of Alpena, Mich., B. S. E. E. University of Michigan, 1963. Electrical Engineering.

Stephen Lewis Kossman, of Paterson, N. J., B. S. The Johns Hopkins University, 1969. Management Science.

Thomas Walter Kowalczyk, of Greenbelt, Md., B. S. Massachusetts Institute of Technology, 1969. Electrical Engineering.

Phillip Edward Lantz, of Silver Spring, Md., M. A. University of Wyoming, 1966. Management Science.

Calvin Obed Lawrence, of Falls Church, Va., B. S. Lamar State College of Technology (Texas), 1963. Numerical Science.

George Spencer Lieske, of Timonium, Md., B. S. State Teachers College (Md.), 1961. Numerical Science.

Harry Lovell Loats, Jr., of Westminster, Md., B. S. The Johns Hopkins University, 1970. Numerical Science.

William Bicknell Lounsbury, of Baltimore, Md., B. S. M. E. Rutgers University, 1961. Management Science.

Alfred Burton Marsh III, of Baltimore, Md., B. A. The Johns Hopkins University, 1968; M. S. E., 1969. Computer Science.

James Melvin McKee, of Fairfax, Va., B. S. University of Akron, 1967. Numerical Science.

Edwin Elliott Mengel, of Silver Spring, Md., B. E. S. The Johns Hopkins University, 1963. Numerical Science.

Robert William Messmer, of Cockeysville, Md., B. E. S. The Johns Hopkins University, 1967. Management Science.

John Francis Murray, Jr., of Greenbelt, Md., B. S. University of Massachusetts, 1967. Numerical Science.

David Lee Neal, of Cockeysville, Md., B. S. University of Cincinnati, 1968. Electrical Engineering.

Robert Hovis Neff, of Coral Gables, Fla., B. S. E. E. University of Miami, 1967. Electrical Engineering.

John Kenneth Nieberding, of Baltimore, Md., B. S. E. The Johns Hopkins University, 1961. Numerical Science.

Larry Scott Norcutt, of Laurel, Md., B. S. Michigan State University, 1969. Electrical Engineering.

Stephen Gary O'Brian, of Adelphi, Md., B. S. Worcester Polytechnic Institute, 1964; M. S. E. The University of Michigan, 1965. Management Science.

Zalel Ostrow, of Pikesville, Md., B. S. The Johns Hopkins University, 1968. Management Science.

Gary Evan Paisley, of Columbia, Md., B. A. University of California, Los Angeles, 1961; M. A. California State College, 1966. Numerical Science.

Robert Anthony Phillips, of Laurel, Md., B. S. Merrimack College, 1968. Numerical Science.

Edward Michael Piechowiak, of Baltimore, Md., B. S. E. The Johns Hopkins University, 1963. Electrical Engineering.

Nelson Victor Pollack, of Ellicott City, Md., B. S. E. E. University of Bridgeport, 1969. Electrical Engineering.

Daniel Chester Pond, of Silver Spring, Md., B. S. Worcester Polytechnic Institute, 1969. Electrical Engineering.

Gilbert Edwin Prine, of Silver Spring, Md., B. A. Syracuse University, 1955. Applied Physics.

David John Rahnis, of Baltimore, Md., B. S. The Johns Hopkins University, 1967. Management Science.

David Duffield Richards, of Columbia, Md., B. S. Purdue University, 1968. Numerical Science.

Raymond Lee Riley, of White Marsh, Md., B. E. S. The Johns Hopkins University, 1970. Computer Science.

Edward Victor Rivard, of Silver Spring, Md., B. S. E. E. Southeastern Massachusetts Technological Institute, 1965. Electrical Engineering.

Donald John Schmidt, of Columbia, Md., B. S. Villanova University, 1954; M. S. Pennsylvania State University, 1956. Electrical Engineering.

John Joseph Schneeberger, of Laurel, Md., A. B. Florida State University, 1964. Numerical Science.

Thomas Arthur Schonhoff, of Quincy, Ill., B. S. Massachusetts Institute of Technology, 1969. Electrical Engineering.

Jacob Schwartz, of Baltimore, Md., B. S. Brooklyn College, 1947. Management Science.

John Joseph Sell, of Severna Park, Md., B. S. Adelphi College, 1960. Management Science.

Dennis Paul Serpico, of Columbia, Md., B. S. E. E. University of Illinois, 1968. Electrical Engineering.

Larry Frank Shanok, of Chicago, Ill., B. S. University of Illinois, 1969. Management Science.

Clarance Douglas Smith, of Aberdeen, Md., B. S. Guilford College, 1963. Electrical Engineering.

Silvio Soares, of Rio de Janeiro, Brazil, B. S. E. E. Instituto Tecnologico de Aeronautica, Brazil, 1959. Electrical Engineering.

William Royce Stewart, Jr., of Greenbelt, Md., B.S. Tufts University, 1966. Management Science.

Artiur Karl Stuempfle, of Edgewood, Md., B.S. Drexel Institute of Technology, 1962. Physics.

Analysis of Optical Techniques and Holographic Methodology for Assessment of Dynamic Aerosols in a Wind Tunnel.

Beverly Lee Switzer, of Baltimore, Md., B.S. Towson State College (Md.), 1962. Numerical Science.

Cynthia Joyce Taylor, of San Angelo, Texas, B.A. University of Texas, 1969. Numerical Science.

Frank Tighe, Jr., of Baltimore, Md., B.S.E. The Johns Hopkins University, 1969. Electrical Engineering.

Vytautas Antanas Treideris, of Baltimore, Md., B.S.E. The Johns Hopkins University, 1967. Numerical Science.

Gordon Trumbull Trotter, of Columbia, Md., B.S. University of Maryland, 1956. Management Science.

William Lynn Wallace, of Derwood, Md., B.S. Queens College, 1963. Numerical Science.

Huai Wang, of Randallstown, Md., B.S. University of Illinois, 1962. Numerical Science.

Celestine Traynham Washington, of Baltimore, Md., B.S. Virginia State College, 1956. Numerical Science.

Harold Richard Wharton, of Baltimore, Md., B.S.E.E. Virginia Polytechnic Institute, 1959. Numerical Science.

Harold Wickersham, of Dunkirk, Md., B.A. University of South Florida, 1964. Numerical Science.

Robert Eugene Willey, of Joppa, Md., B.S. University of Maryland, 1952. Applied Physics.

Gerald John Woloson, of Detroit, Mich., B.S. Oakland University, 1970. Electrical Engineering.

Claire Marchant Zufall, of Greenbelt, Md., B.S. Mary Washington College, 1968. Numerical Science.

Walter Joseph Zylka, of Linthicum, Md., B.S. Loyola College, 1966. Numerical Science.

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MASTERS OF EDUCATION

in The Evening College

Mary Louise Ament, of Lutherville, Md., B.S. Towson State College (Md.), 1969.

Sandra Rebecca Becker Andrews, of Reisterstown, Md., B.S. Towson State College (Md.), 1967.

Stoddard Smith Bangs, of Detroit, Mich., B.S. University of Maryland, 1963.

Etheline Juanita Barland, of Baltimore, Md., B.S. Coppin State College (Md.), 1952.

Genevieve Fischer Barnes, of Baltimore, Md., B.S. St. Joseph College, 1961.

Carol Graham Becker, of Baltimore, Md., B.A. Washington College, 1951.

Harvey Richard Bennett, of Aberdeen, Md., B.S. West Virginia University, 1964.

David Michael Benson, of Baltimore, Md., B.A. The Johns Hopkins University, 1969.

Sheila Denise Biddle, of Baltimore, Md., B.S. Morgan State College (Md.), 1966.

Eugene Michael Bisi, of Baltimore, Md., B.S. Indiana State College, 1965.

Joan Marsha Block, of Randallstown, Md., B.S. University of Maryland, 1966.

Emanuel Blow, of Baltimore, Md., B.A. Howard University, 1959; M.A., 1966.

William Elrod Bray, of Baltimore, Md., B.A. University of Georgia, 1959.

Robin Smith Biddison Brosnahan, of Baltimore, Md., B.S. University of Delaware, 1959.

Alma B. Walker Brown, of Baltimore, Md., B.S. Coppin State College (Md.), 1957.

Linda Boyer Brundrett, of Baltimore, Md., B.S. University of Maryland, 1968.

Irene McCadden Bryant, of Baltimore, Md., A.B. University of Buffalo, 1947.

Eugene Joseph Canton, Jr., of Baltimore, Md., B.A. Towson State College (Md.), 1967.

Mary Ann Nichols Clark, of Timonium, Md., B. S. George Washington University, 1957.

Esther Eileen Cohen, of Baltimore, Md., B. S. University of Maryland, 1969.

Thelma Jean Craig, of Baltimore, Md., B. S. Coppin State College (Md.), 1960.

Rosemarie Ventura Crisostomo, of Baltimore, Md., B. S. Towson State College (Md.), 1968.

George Roger Crook, of Clyde, Texas, B. A. Hardin-Simmons University, 1954.

Roberta Ella Churchill Crosby, of Randallstown, Md., M. A. New York University, 1948.

Vaughn Dana Crowl, of Hagerstown, Md., B. S. Frostburg State College (Md.), 1968.

Patricia Ann Dercole, of Baltimore, Md., B. S. East Carolina College, 1964.

Lynn Stemple Deutschman, of Baltimore, Md., B. S. The Ohio State University, 1967.

Frederick Paul Deverse, of Pasadena, Md., B. A. Gannon College, 1964.

Dawn Dolores Dixon, of Baltimore, Md., B. S. Towson State College (Md.), 1957.

Robert Wesley Doms, of Timonium, Md., B. G. E. University of Omaha, 1965.

Barbara Glassman Donick, of Baltimore, Md., B. A. Goucher College, 1959.

Beth Aronson Drucker, of Madison, Wis., B. Ed. University of Miami, 1968.

Janet Valli Edelmann, of Baltimore, Md., B. A. Frostburg State College (Md.), 1966.

Jane Jackson Edmonds, of Abingdon, Md., B. S. Towson State College (Md.), 1968.

Catherine Shelburne English, of Owings Mills, Md., B. A. Chatham College, 1967.

John Jarvis English, Jr., of Owings Mills, Md., B. A. Dartmouth College, 1967.

Betty Ripple Fanshaw, of Reisterstown, Md., B. S. Towson State College (Md.), 1965.

Donna Sue Feinblum, of Baltimore, Md., B. S. University of Maryland, 1968.

Robert Hillis Fickley, of Washington, D. C., A. B. George Washington University, 1967.

Janice Lorraine Fleming, of Baltimore, Md., B. A. College of Our Lady of the Elms, 1968.

Ronald Kent Fuss, of Columbia, Md., B. A. Parsons College, 1967.

Mattie Eugenia Ferguson Gaines, of Baltimore, Md., B. S. Morgan State College (Md.), 1957.

John Christopher George, of Frederick, Md., B. S. Georgetown University, 1968.

Nancy Mairs Gephart, of Baltimore, Md., A. B. Mt. Holyoke College, 1949.

Patricia Petnic Gibson, of Hampstead, Md., B. S. Towson State College (Md.), 1964.

Jean McCoy Gisriel, of Baltimore, Md., B. S. Boston University, 1961.

Frances Ralph Graham, of Baltimore, Md., B. S. Coppin State College (Md.), 1946.

Marjorie Lee Griffith, of Baltimore, Md., B. A. Wells College, 1942.

Billie Jean Grigsby, of Baltimore, Md., B. A. University of Richmond, 1966.

Lydia Louise Grinage, of Baltimore, Md., B. S. Coppin State College (Md.), 1957.

Nannell Bartenstein Grube, of Millersville, Md., B. A. Mary Washington College, 1967.

Susan I. Hackerman, of Baltimore, Md., B. S. University of Maryland, 1969.

Robert James Hewes, of Linthicum, Md., B. S. Towson State College (Md.), 1960.

Elvenia Casher Hopkins, of Baltimore, Md., B. S. Morgan State College (Md.), 1955.

Maxine Dates Hurley, of Baltimore, Md., A. B. Morgan State College (Md.), 1964.

Phyllis Hurwitz Isaacson, of Baltimore, Md., B. S. Towson State College (Md.), 1960.

Thaddeus Edward Jackson, Jr., of Severn, Md., B. G. E. University of Omaha, 1965.

Iris Yvonne Jacobs, of Annapolis, Md., B. S. State Teachers College, Bowie, 1955.

Havanah Gwendolyn McBryde Jefferson, of Baltimore, Md., B. S. Morgan State College (Md.), 1968.

Delores Patricia Johnson, of Baltimore, Md., B. S. Coppin State Teachers College (Md.), 1962.

Mary Frances Jordan, of Baltimore, Md., B. S. Morgan State College (Md.), 1968.

Joan Gerson Karr, of Monroeville, Pa., B. S. Ed. Temple University, 1965.

Robert Lawrence Keeley, of Linthicum, Md., B. A. Studium Generale of St. Thomas Aquinas, 1953.

Sarah Mandy Kern, of Baltimore, Md., B. S. University of Maryland, 1966.

Lyman Coleman Knight III, of Baltimore, Md., B. S. Ed. Muskingum College, 1967.

Trude Neuman Kranzler, of Baltimore, Md., B. A. Towson State College (Md.), 1971.

Deborah Simon Levinson, of Baltimore, Md., A. B. Goucher College, 1968.

Susan Klein Lorch, of Randallstown, Md., B. S. University of Maryland, 1968.

Marilyn Ann Bloom Lutz, of Phoenix, Md., A. B. College of Notre Dame of Maryland, 1969.

Estelle Mallory Madison, of Baltimore, Md., B. S. Coppin State College (Md.), 1958.

Elayne Ruth Magaziner, of Baltimore, Md., B. S. Towson State College (Md.), 1968.

Edward Neil Magnus, of Baltimore, Md., A. B. St. Mary's Seminary and University, 1959.

Kathleen Jean Withers McDonald, of Baltimore, Md., B. S. University of Maryland, 1969.

Thomas Shipley McElroy, of Baltimore, Md., B. A. The Johns Hopkins University, 1969.

Alma Lynn McLean, of Baltimore, Md., B. A. Frostburg State College (Md.), 1968.

Thomas Michael McLernon, of Columbia, Pa., B. A. Mt. St. Mary's College, 1953.

Grace Hooper McNeal, of Baltimore, Md., B. S. The Johns Hopkins University, 1969.

Thomas Claude McShane, of Fawn Grove, Pa., B. S. Towson State College (Md.), 1970.

Anita Carol Press Miller, of Baltimore, Md., B. S. University of Maryland, 1969.

Iver Arnold Mindel, of Baltimore, Md., B. A. The Johns Hopkins University, 1966.

Michael Francis Molloy, of Baltimore, Md., A. B. Loyola College, 1969.

Sylvia Fox Naiman, of Baltimore, Md., B. A. University of Maryland, 1963.

Winifred Mary Neville, of Baltimore, Md., A. B. Hunter College, 1959.

Carol Ann Wright Nickel, of Baltimore, Md., B. A. Bucknell University, 1969.

Ronald Paul Nickel, of Baltimore, Md., B. A. Valparaiso University, 1968.

Bonnie Lynn Orkin, of Baltimore, Md. B. S. University of Maryland, 1969.

Carolyn Diane Otremba, of Kingsville, Md., B. S. Frostburg State College (Md.), 1967.

Frances Rose Palazzolo, of Baltimore, Md., B. A. Mt. St. Agnes College, 1968.

Frances Adele Parks, of Baltimore, Md., B. S. Hampton Institute, 1959.

Mary Elizabeth Passage Pederson, of Auburn, Wash., B. S. University of Washington, 1967.

Charlotte Marcella Peltz, of Pikesville, Md., B. A. Parsons College, 1970.

Keith Maxwell Perry, of Savage, Md., B. A. University of Maryland, 1968.

Herbert William Pipkin, of Baltimore, Md. B. S. The Johns Hopkins University, 1971.

Nancy Cox Pipkin, of Baltimore, Md., B. S. University of Florida, 1958.

Ann Carol Ottenheimer Poltilove, of Columbia, Md., B. S. University of Maryland, 1970.

Abe J. Price, of Baltimore, Md., B. S. Ed. Bloomsburg State College (Pa.), 1963.

Dorothy J. Browner Pringle, of Baltimore, Md., B. A. Morgan State College (Md.), 1965.

Sumitra Seshagiri Rao, of Baltimore, Md., B. A. Queen Mary's College, Madras University, 1950.

Arianne Schrodel Regester, of Upperco, Md., B. S. The Johns Hopkins University, 1970.

Robert William Reynolds, of Columbia, Md., B. E. The Johns Hopkins University, 1933.

Arlene Rubin Rivkin, of Baltimore, Md., A. B. Goucher College, 1959.

Edward Hamilton Robinson III, of Churchville, Md., B. A. Marshall University, 1969.

Harriet Ann Rosenberg, of Ellicott City, Md., B. S. University of Maryland, 1969.

Florence Lum Saito, of Honolulu, Hawaii, B. A. Univerversity of Hawaii, 1948.

Mary Margaret Sands, of Baltimore, Md., B. A. Mt. St. Agnes College, 1968.

Shirley Boyd Saxton, of Baltimore, Md., B. S. Towson State College (Md.), 1967.

John Finley Schneider, of Glen Burnie, Md., B. A. Fairmont State College (W. Va.), 1964.

Betty Irene Samuels Seidel, of Baltimore, Md., B. S. The Johns Hopkins University, 1942.

Polly Elizabeth Pugatch Senker, of Baltimore, Md., B. A. Towson State College (Md.), 1969.

Martha Burns Spears, of Baltimore, Md., B. S. East Carolina University, 1968.

Robert John Stack, of Silver Spring, Md., B. A. Washington & Lee University, 1968.

Harriet Hirsch Scharogrodsky Steinberg, of Baltimore, Md., B. S. The Johns Hopkins University, 1941.

Stephany Einstein Steinberg, of Baltimore, Md., B. S. University of Maryland, 1968.

Anne Goldsmith Sterlock, of Owings Mills, Md., B. S. Towson State College (Md.), 1967.

Lois Arline Reesman Stevens, of Sparks, Md., B. S. John B. Stetson University, 1950.

Miriam Ingrid Straus, of Baltimore, Md., B. S. University of Maryland, 1969.

Cheryl Margaret Sweeney, of Keene, N. H., A. B. Emmanuel College, 1966; M. A. T. The Johns Hopkins University, 1967.

Francis Neil Tillman, of Baltimore, Md., B. S. Towson State College (Md.), 1965.

Mary Anne Tobin, of Baltimore, Md., B. A. Avila College, 1964.

Joseph Norman Trachtman, of Aberdeen, Md., O. D. Pennsylvania College of Optometry, 1969.

Maureen Kelly Viereckt, of Baltimore, Md., B. S. Towson State College (Md.), 1966.

Lauretta R. Abrams Walden, of Baltimore, Md., B. S. Coppin State College (Md.), 1952.

Kent George Washburn, of Pittsburgh, N. H., B. S. University of Oregon, 1966.

Steven Julius Weiler, of Baltimore, Md., B. Mus. Ed. Peabody Conservatory of Music, 1968.

Thomas Edward Wenz, of Annapolis, Md., A. B. University of Michigan, 1961.

Florence Jones Westfield, of Baltimore, Md., B. S. Morgan State College (Md.), 1967.

Marilyn Mason Whipps, of Baltimore, Md., B. S. Towson State College (Md.), 1968.

Barbara Melocik Whitlock, of Upperco, Md., B. S. Loyola College, 1966.

Minnie Lillian Wilson, of Baltimore, Md., B. S. Coppin State College (Md.), 1963.

Dolores Lucrecia Winston, of Baltimore, Md., B. S. Coppin State College (Md.), 1961.

Alice Acors Wishard, of Baltimore, Md., B. S. Towson State College (Md.), 1968.

Virginia Lee Wood, of Aberdeen, Md., B. S. P. E. West Virginia University, 1967.

Mary Ann Weldon Yannuzzi, of Baltimore, Md., B. S. St. Peter's College, 1970.

Robert Stephen Yuhasz, of Columbia, Md., B. S. Lehigh University, 1966.

Sarah Ann Hunley Zucker, of Baltimore, Md., B. A. Washington College, 1960.

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MASTERS OF LIBERAL ARTS

in The Evening College

Mae Frances Alston, of Baltimore, Md., B. S. North Carolina Agricultural Technical State University, 1956; M. A. University of Michigan, 1962.

Susan Carole Hummel Applefeld, of Randallstown, Md., B. S. University of Maryland, 1962.

Michael James Baldwin, of Dallastown, Pa., B. A. Elizabethtown College, 1965.

I. Max Baumann, of Baltimore, Md., M. A. University of Maryland, 1949.

Caroline Amelia Riefle Beatty, of Baltimore, Md., A. B. Duke University, 1935.

Wilbur Vincent Bechtel, of Baltimore, Md., A. B. St. Mary's University, 1946.

Kathleen Anne Beres, of Baltimore, Md., B. A. College of Notre Dame of Maryland, 1970.

Cheryl Elizabeth Hansen Bianco, of Baltimore, Md., A. B. Mount St. Agnes College, 1969.

Elizabeth Jane Biliske, of Baltimore, Md., B. A. Midland College, 1964.

James Byron Blackburn, of Evant, Texas, B. S. Tarleton State College (Texas), 1965.

Robert Chaffee Blount, of Baltimore, Md., B. S. United States Naval Academy, 1944.

Stuart Eliot Bonwit, of Silver Spring, Md., B. E. E. George Washington University, 1945.

Sophia Leutner Bortner, of Baltimore, Md., B. S. The Johns Hopkins University, 1941.

Timothy Michael Breslin, of Catonsville, Md., B. S. Mount St. Mary's College, 1969.

David Brewster, of Silver Spring, Md., B. S. The Johns Hopkins University, 1966.

Mary Russell Brooks, of Baltimore, Md., B. S. University of Maryland, 1959.

Charles Smith Bullamore, of Baltimore, Md., B. A. The Citadel, 1962.

Margaret Hatch Butler, of Towson, Md., B. A. Carleton College, 1946.

Doris Mae Hood Cameron, of Baltimore, Md., B. S. Wheelock College, 1958.

Marsha Diener Caplan, of Baltimore, Md., B. A. University of Maryland, 1959.

Sidney Carton, of Baltimore, Md., B. S. The Johns Hopkins University, 1964.

William Joseph Carton, Jr., of Baltimore, Md., Ph. B. Northwestern University, 1967.

Bernadette Marie Clemens, of Baltimore, Md., A. B. College of Notre Dame of Maryland, 1968.

Ronald Cohen, of Baltimore, Md., B. A. University of Maryland, 1967.

Frances Ann Cook, of Baltimore, Md., A. B. Mt. St. Agnes College, 1965.

Doris Brooksaler Cowl, of Timonium, Md., B. A. University of Texas, 1964.

Beverly Courtney Crook, of Phoenix, Md., B. S. Towson State College (Md.), 1939.

Donald LeRoy Davidson, of Baltimore, Md., B. S. The Johns Hopkins University, 1967.

Joanne Mattson DeVoe, of Baltimore, Md., B. S. N. Cornell University, 1960.

Thomas Leland Dove, of Severna Park, Md., B. S. University of Maryland, 1963.

Robert Galento Draine, of Baltimore, Md., B. A. Delaware State College, 1960.

Saul Drucker, of Madison, Wis., B. A. Duquesne University, 1967.

Mary Elizabeth Rogers Ector, of Linthicum, Md., B. S. University of Houston, 1956.

Lilly Lowinger Egerton, of Owings Mills, Md., B. S. The Johns Hopkins University, 1966.

Elizabeth Cassidy Elliott, of Louisville, Ky., B. A. University of Delaware, 1963.

Mary Dolores Endres, of Baltimore, Md., B. A. St. Joseph College, 1968.

Elaine Margaret Ewing, of Baltimore, Md., B. A. University of Maryland, 1968.

Allan Peter Fagan, of Laurel, Md., B. S. Stetson University, 1958.

Patricia H. Fagan, of Laurel, Md., B. S. Stetson University, 1958.

Cynthia Riley Fehsenfeld, of Glyndon, Md., A. B. Smith College, 1956; M. A. The Johns Hopkins University, 1963.

Katherine Parvis Ferris, of Baltimore, Md., B. A. University of Maryland, 1967.

Beverly Burlend Fiege, of Greenbelt, Md., B. S. University of Wisconsin, 1961.

Abraham Finkel, of Silver Spring, Md., B. E. E. College of the City of New York, 1947.

Thomas John Finnegan, of Chestertown, Md. B. A. Washington College, 1965.

Mary Janes Fisher, of Baltimore, Md., B. S. Mary Washington College, 1946; M. Ed. The Johns Hopkins University, 1962.

Susan Lourdes Snyder Flynn, of Baltimore, Md., B. A. College of Notre Dame of Maryland, 1969.

Clarence Herman Foard, of Timonium, Md., B. S. E. The Johns Hopkins University, 1965.

Elinor Sandlass Freedenburg, of Baltimore, Md., B. A. University of Maryland, 1967.

Marianna Elizabeth Buccheri Freeman, of Severn, Md., B. A. St. Joseph College, 1967.

Theodosia Easter Frost, of Alexandria, Va., A. B. Vassar College, 1969.

Osbaldo Rene Garcia, of Baltimore, Md., B. A. Pan American College, 1963.

Victoria Lynn Garvey, of Baltimore, Md., A. B. Mount St. Agnes College, 1970.

Catherine Russell Gira, of Columbia, Md., B.S. State Teachers College (Pa.), 1953; M.Ed. The Johns Hopkins University, 1957.

Andrew Harry Goldsmith, of Edgewood Arsenal, Md., M.S. Massachusetts Institute of Technology, 1968.

George Shannon Goudy, Jr., of Baltimore, Md., B.S. Towson State College (Md.), 1962.

Louis Theodore Grant, of Baltimore, Md., B.A. University of Maryland, 1966.

Kathleen Webbert Halpin, of Baltimore, Md., B.S. Towson State College (Md.), 1969.

Charles Leslie Harris, of Baltimore, Md., B.F.A. Maryland Institute, 1964.

Peggy Lynn Wilson Hegwood, of Crofton, Md., B.A. Wake Forest College, 1966.

Katherine Edith Henderson, of Columbia, Md., B.A. Towson State College (Md.), 1966.

Jerome David Hoffman, of Cockeysville, Md., A.B. Western Maryland College, 1968.

Patricia Joyce Homer, of Baltimore, Md., B.A. Thiel College, 1958; M.S.L.S. Western Reserve University, 1960.

Rehana Hussain, of Baltimore, Md., B.A. University of Karachi, 1969.

Sondra Kosowsky Itkin, of Baltimore, Md., B.A. New York University, 1954.

Patricia Haney Joseph, of Baltimore, Md., B.A. Elmira College, 1963.

Deborah Lavery Joynes, of Baltimore, Md., B.A. Frostburg State College (Md.), 1967.

Joanna Barkalow Kann, of Baltimore, Md., B.A. North Carolina State University, 1965.

Dorothy Tucker Katzenstein, of Baltimore, Md., B.S. The Johns Hopkins University, 1965.

Lillian Cleaver Kazazian, of Baltimore, Md., B.S. Columbia University, 1961.

Judith Ann Kidd, of Baltimore, Md., A.B. College of Notre Dame of Maryland, 1966.

Eileen Mary Kidwell, of Baltimore, Md., B.A. St. Joseph College, 1970.

Joseph Donald Kilgallon, of Ellicott City, Md., A.B. King's College, 1962.

Kara Rogers Koppanyi, of Baltimore, Md., B.Mus. Peabody Conservatory, 1967.

Edward Richard Koss, of Pittsburgh, Pa., B.S. California State College, 1969.

Janet Louise Tolbert Kuethe, of Baltimore, Md., B.S. Towson State College (Md.), 1966.

William Leonard LaForce, Jr., of Joppa, Md., B.S. The Johns Hopkins University, 1967.

Robert J. Lamb, of Dayton, Ohio, B.A. University of Dayton, 1966.

James Sewell Lamdin, of Bel Air, Md., B.S. University of Maryland, 1961.

Donna Feller Lappé, of South Orange, N.J., B.S. New York University, 1969.

Barbara Willing Lavery, of Baltimore, Md., B.S. Salisbury State Teachers College (Md.), 1941.

John Roger Lee, of Baltimore, Md., A.B. University of Miami, 1969.

Wilbur Leon Lee, of Merrimac, Wis., B.S.C.E. University of Southwestern Louisiana, 1964.

David Leroy Leppo, of Sykesville, Md., B.A. Dickinson College, 1959.

Pearl Zallis Lerner, of Baltimore, Md., B.A. University of Maryland, 1952.

Kathryn Baldwin Scates Levedahl, of Baltimore, Md., A.B. Duke University, 1949.

Gary Jay Levin, of Baltimore, Md., B.A. University of Maryland, 1966.

Ghita Neufeld Levine, of Baltimore, Md., B.S. Columbia University, 1958.

Bertram Thomas Lloyd, of Columbia, Md., B.S. University of Maryland, 1965; M.Ed. Loyola College, 1968.

Brent Leslie Lloyd, of Alexandria, Va., B.S. University of Tennessee, 1969.

Stella Marie Loeffler, of Baltimore, Md., A.B. University of Denver, 1935.

William Lee Lurton, of Churchville, Md., B.S. Salisbury State College (Md.), 1956; M.Ed., 1967.

Joan Cornell Lynch, of Baltimore, Md., A.B. Douglass College, 1963.

Brian Charles Lysaght, of Baltimore, Md., B.S. Towson State College (Md.), 1970.

Michal Richard Makarovich, of Baltimore, Md., B.S. Towson State College (Md.), 1968.

Linda Vivian Epstein Mandel, of Baltimore, Md., B. S. University of Maryland, 1963.

Thomas Jefferson Manus, of Baltimore, Md., B. A. Middle Tennessee State College, 1964.

Bronwyn Southworth McCaffrey, of Baltimore, Md., B. A. Towson State College (Md.), 1968.

Margie Hawley McEwen, of Ann Arbor, Mich., B. A. University of Michigan, 1968.

Mary Sharp McLanahan, of Baltimore, Md., A. B. Wheaton College, 1961.

Frederick Gilbert Medinger, of Baltimore, Md., B. A. The Johns Hopkins University, 1969.

Anna Elaine Mentzer, of Baltimore, Md., B. A. Western Maryland College, 1969.

Beverly L. Milkman, of Washington, D. C., B. A. University of Arizona, 1967.

Barrett Allan Miller, of Severna Park, Md., B. A. University of California, 1964.

Cheryl Jean Miller, of Monhall, Pa., A. B. Allegheny College, 1966.

Margaret Gray Miller, of Sparks, Md., A. B. University of Michigan, 1965.

Barbara Assaid Mills, of Baltimore, Md., B. S. Longwood College, 1954.

Ronald Wilbur Moch, of Webster Groves, Mo., B. S. Agri. University of Missouri, 1964; D. V. M., 1966.

Barbara Terry Moore, of Baltimore, Md., B. A. Western Maryland College, 1963.

Gilbert James Moore, of Baltimore, Md., B. A. University of Maryland, 1967.

Nancy Lee Morrison, of Timonium, Md., B. A. Pennsylvania State University, 1962.

Patrice Cernik Morrison, of Baltimore, Md., B. A. Towson State College (Md.), 1968.

Linda Labate Mushlin, of Baltimore, Md., B. A. Dickinson College, 1962.

Dennis Michael O'Keefe, of Baltimore, Md., A. B. Loyola College, 1968.

Allan Barry Oshry, of Baltimore, Md., B. S. Towson State College (Md.), 1959.

Richard William Owen III, of Baltimore, Md., B. S. Towson State College (Md.), 1967.

Elfazar Parmly IV, of Baltimore, Md., B. S. United States Military Academy, 1946.

Leonard Lee Peshkin, of Baltimore, Md., B. S. The Johns Hopkins University, 1963.

Hermann Otto Pfrengle, of Joppa, Md., B. A. Oakland University, 1970.

Janet Elizabeth Polunas, of Baltimore, Md., A. B. College of Notre Dame of Maryland, 1969.

Roger Wayne Price, of Baltimore, Md., B. A. Towson State College (Md.), 1964.

Roberta Ruth West Proctor, of Owings Mills, Md., B. S. Towson State College (Md.), 1965.

Michelle Martin Pulliam, of Baltimore, Md., B. A. University of Maryland, 1966.

Joseph Edward Purcell, of Cockeysville, Md., M. Ed. Loyola College, 1968.

Dale Wentz Raubenstine, of Baltimore, Md., B. S. Pennsylvania State University, 1960.

Roland Francis Recker, Jr., of Laurel, Md., B. S. Loyola College, 1966.

Thomas Joseph Rickle, of Owings Mills, Md., B. S. E. The Johns Hopkins University, 1967.

Joan Dana Rombro, of Baltimore, Md., B. S. University of Maryland, 1968.

Patricia Bechan Rosenquist, of Lutherville, Md., B. A. University of Nebraska, 1953.

Karen Hildie Ross, of Baltimore, Md., A. B. Goucher College, 1967.

James Rudisill, of Mt. Wolf, Pa., B. S. Indiana University of Pennsylvania, 1956.

Sandra Rosalynne Woods Saffer, of Baltimore, Md., B. A. College of Notre Dame of Maryland, 1966.

James Morris Sanders, Jr., of Baltimore, Md., B. S. Towson State Teachers College (Md.), 1954; M. Ed. The Johns Hopkins University, 1959.

Jo Ann Ragland Schmidt, of Baltimore, Md., B. A. Western Maryland College, 1965.

Mary Schmitt Schreiber, of Baltimore, Md., B. A. University of Houston, 1968.

Barbara Truitt Duley Shanklin, of Monkton, Md., B. S. University of Maryland, 1964.

William Joseph Shea, of New City, N. Y., B. A. St. Francis College, 1962.

Arthur Adam Sipes, of Baltimore, Md., M. Ed. Loyola College, 1970.

Sister Mary Walburga Sito, F. S. S. J., of Baltimore, Md., B. S. St. Louis University, 1943.

Jacqueline Soble Smelkinson, of Lutherville, Md., B. S. The Johns Hopkins University, 1956.

Jean Stewart Waller Smith, of Baltimore, Md., A. B. Middlebury College, 1964.

Jeanne Stuart Brown Solomon, of Dover, Del., B. S. Towson State College (Md.), 1960.

Donna Louise Sopchick, of Baltimore, Md., B. S. Indiana University of Pennsylvania, 1967.

Beatrice Squire, of Baltimore, Md., B. S. Virginia Union College, 1965.

Barry Joel Staats, of York, Pa., B. B. A. Westminster College, 1962; M. Ed., 1964.

Suzanne Hedwig Starr, of Baltimore, Md., B. S. Towson State College (Md.), 1970.

Patricia Douglas Stewart, of Baltimore, Md., A. B. University of Alabama, 1967.

Michael Louis Storey, of Baltimore, Md., M. A. Niagara University, 1965.

June Elise Streckfus, of Baltimore, Md., B. S. University of Maryland, 1968.

Cheryl Baker Stuart, of Baltimore, Md., B. S. Pennsylvania State University, 1967.

John Patrick Sullivan, of Baltimore, Md., B. A. University of Minnesota, 1969.

James Ronald Swab, of Columbia, Md., B. A. Florida Atlantic University, 1965.

Monica Beth Thomson, of Baltimore, Md., B. S. N. The Johns Hopkins University, 1949; M. A. Teachers College, Columbia University, 1959.

Elizabeth Evans Toland, of Baltimore, Md., A. B. George Washington University, 1959.

Jo Ann Marilyn Tomeck, of Baltimore, Md., B. A. Siena Heights College, 1969.

Gale Scott Troxler, of Greensboro, N. C., B. A. University of North Carolina, 1964.

Barbara Anne Van Aken, of Baltimore, Md., B. A. Elizabethtown College, 1968.

Norbert Bernard Wagner, Jr., of Perry Hall, Md., B. A. LaSalle College, 1970.

Richard Norris Westcott, of Springfield, Pa., B. S. Drexel Institute of Technology, 1960.

Patricia Madden Wilhelm, of Baltimore, Md., B. S. Towson State College (Md.), 1969.

Sondra Jeanne Boyle Williams, of Darlington, Md., B. A. Towson State College (Md.), 1965.

Gary Wayne Winch, of Arnold, Md., B. A. University of Vermont, 1967.

Leslie Susan Winner, of Baltimore, Md., A. B. University of Maryland, 1966.

William Glenn Workman, of Reisterstown, Md., B. A. Transylvania College, 1951.

Judith Zubin, of Baltimore, Md., B. A. Ohio Wesleyan University, 1965.

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CERTIFICATES OF ADVANCED STUDY

in The Evening College

Jean Marie Bouton, of Baltimore, Md., M. S. Smith College, 1966. Education.

Dorothy Brown Brooks, of Baltimore, Md., M. Ed. Loyola College, 1958. Education.

James Anthony Bryan, of Baltimore, Md., A. B. Western Maryland College, 1961; M. L. A. The Johns Hopkins University, 1969. Liberal Arts.

Joseph Dennis Bucciere, of Eldersburg, Md., B. A. St. Vincent College, 1965; M. Ed. University of Pittsburgh, 1966. Education.

Joan Schmidt Burnett, of Baltimore, Md., B. S. State University of New York, 1956; M. L. A. The Johns Hopkins University, 1968. Education.

Irvin Edmond Cox, of Baltimore, Md., M. A. New York University, 1952. Education.

Eileen Sullivan Dezell, of Lutherville, Md., B. A. Trinity College, 1950; M. A. Teachers College, Columbia University, 1951. Education.

Kathleen Joy Drakulich, of Towson, Md., B. A. Butler University, 1968; M. A. Indiana University, 1970. Education.

Marie Theresa Giza, of Baltimore, Md., M. A. Catholic University, 1960. Education.

John Ray Hamilton, of Baltimore, Md., A. M. Temple University, 1960. Education.

Derrick Walford Hockin, of Ellicott City, Md., B. A. Western Carolina College (N. C.), 1959; B. S., 1960; M. Ed. The Johns Hopkins University, 1970. Education.

Britt Ingalill Monica Holmstrom, of Hydes, Md., B. S. The Johns Hopkins University, 1967. Liberal Arts.

Catherine Ellen Ryan Hormanski, of Baltimore, Md., A. B. Mt. St. Agnes College, 1959; M. Ed. The Johns Hopkins University, 1964. Education.

Nancy Hanna Hunt, of Baltimore, Md., B. S. The Johns Hopkins University, 1961; M. Ed., 1970. Education.

Edna Mae Jackson, of Baltimore, Md., B. S. Morgan State College (Md.), 1968; M. Ed. The Johns Hopkins University, 1969. Education.

Raymond Welty Johnston, of Glen Burnie, Md., B. S. California State College (Pa.), 1967; M. Ed. The Johns Hopkins University, 1969. Education.

Richard Gary Kennard, of Bel Air, Md., M. Ed. Loyola College, 1966. Education.

Jacquelyn Phillips Kraft, of Lutherville, Md., B. S. Towson State College (Md.), 1964. Education.

Edward George MacKenzie, of Beaver Falls, Pa., A. B. Geneva College, 1957; M. Ed. The Johns Hopkins University, 1962. Education.

Clara Ferree Newman, of Pasadena, Md., B. A. Duke University, 1947; M. Ed. The Johns Hopkins University, 1968. Education.

Ella Mae Sanders Phelps, of Pasadena, Md., B. S. University of Maryland, 1965; M. Ed. The Johns Hopkins University, 1968. Education.

James Donald Quickel, of York, Pa., B. S. University of Pennsylvania, 1951; M. L. A. The Johns Hopkins University, 1967. Liberal Arts.

Ruth Kemper Quickel, of York, Pa., A. B. Wilson College, 1937; M. L. A. The Johns Hopkins University, 1967. Liberal Arts.

Pauline Elizabeth Schwing, of Baltimore, Md., M. F. A. Maryland Institute, 1968. Education.

John Scott, Jr., of Baltimore, Md., B. S. Morgan State College (Md.), 1954; M. A. University of Maryland, 1965. Education.

Benjamin Steinberg, of Baltimore, Md., M. Ed. Loyola College, 1960. Education.

Jean Nicholas Warfield, of Clarksville, Md., B. A. Western Maryland College, 1956; M. Ed., 1965. Education.

Joyce Hardy Williams, of Baltimore, Md., A. M. George Washington University, 1964. Education.

Louis Melis Winkelman, Jr., of Baltimore, Md., B. S. Towson State College (Md.), 1964; M. Ed. Western Maryland College, 1966; M. L. A. The Johns Hopkins University, 1970. Education.

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MASTERS OF SCIENCE

in The School of Hygiene and Public Health

Dhia Nura Al-Moussawi, of Baghdad, Iraq, M. B. C. H. Baghdad University College of Medicine, 1961. Public Health Administration (Forensic Pathology).

Injury Pattern of Drivers in Fatal Automobile Accidents.

Rafiqul Huda Chaudhury, of Barisal, East Pakistan, B. A. Dacca University, 1964; M. A. Punjab University, 1966. Population Dynamics.

A Multavariate Analysis of Relative Income Relationship to Fertility.

Paulino Santos Cruz, of Bulacan, Philippines, B. S. University of the Philippines, 1960; M. D. University of the Philippines College of Medicine, 1965. Medical Care and Hospitals.

Allocation of Health Resources Using Available Data for a Small Rural Community.

Harriett Parsons Destler, of Arlington, Va., B. A. Smith College, 1961. Population Dynamics.

Work Before the First Birth: Its Relation to Fertility and Contraceptive Practice.

Peter Allison Doob, of Melville, N. Y., B. A. The Johns Hopkins University, 1969. Public Health Administration.

Prospects for Simulation Gaming in Health Planning and Consumer Health Education.

Victor Nicholas Evdokimoff, of Hyde Park, Mass., B. A. Boston University, 1966; M. S. Northeastern University, 1969. Radiological Science.

Enhancement of Heavy Metal Toxicity by Hepatic Phagocytosis.

Thomas Hung Sheng Hsu, of British Columbia, Canada, B. Sc. McGill University, 1967. Radiological Science.

Effects of Continuous Irradiation of the Seminiferous Epithelium.

Edward Thomas O'Toole, Jr., of Lutherville, Md., B. S. University of Maryland, 1958. Epidemiology.

A *Treponema pallidum* Microhemagglutination Procedure.

Mary Theresa Roberts, of Baltimore, Md., B. S. Saint Mary's College, 1968. Biochemistry.

Uptake of 5-BUdr by *H. influenzae*.

Jimmy Lee Rodden, of Winston Salem, N. C., B. S. University of North Carolina, 1969. Biochemistry.

Purification and Properties of the Cyclic Phosphodiesterase: 5—Nucleotidase of Haemophilus *influenzae*.

Josephine Grogan Smith, of Louisville, Ky., A. B. Randolph-Macon Woman's College, 1958. Radiological Science.

Difference in Chromosome Aberrations in Radiation Workers and in Non-Workers: A Model for Surveillance of Radiation Workers.

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DOCTORS OF SCIENCE

in The School of Hygiene and Public Health

Alan Marshall Beck, of Brooklyn, N. Y., Brooklyn College of City University of New York, 1964; M. A. California State College at Los Angeles, 1968. Mental Hygiene.

The Ecology of Free—Roving Dogs in Baltimore City.

Robert Henry Brook, of Baltimore, Md., B. S. University of Arizona, 1964; M. D. The Johns Hopkins University School of Medicine, 1968. Medical Care and Hospitals.

A Study of Methological Problems Associated With Assessment of Quality of Care.

Pearl S. German, of Baltimore, Md., B. A. Hunter College, 1949; M. A. University of Chicago, 1950. Behavioral Sciences.

Factors in Enrollment in a Prepaid Group Health Plan.

William Boyd Hope, Jr., of Decatur, Ga., B. S. University of Tennessee, 1960; M. S. 1962. Medical Care and Hospitals.

A Study of Clinical Laboratory Tests Performed in Physicians Offices.

James Chin Soo Kim, of Seoul, Korea, D. V. M. Seoul National University, 1960; M. P. H. 1962; M. S. Kansas State University, 1965. Pathobiology.

Pathobiology of Respiratory Mite Infection in Old World Monkeys.

David Morris Levine, of Pittsburgh, Pa., A. B. Brandeis University, 1959; M. D. Vermont Medical School, 1964; M. P. H. The Johns Hopkins University School of Hygiene and Public Health. Behavioral Sciences.

Medical Education and Professional Socialization.

Peng-Tu Liu, of Taipei, Taiwan, B. S. National Taiwan University, 1962; M. S. University of the Philippines, 1967. Biostatistics.

Statistical Studies on the Demographic Impact of Intrauterine Contraceptive Device (IUD) Program.

Storrs Lovejoy Olson, of Tallahasse, Fla., B. S. Florida State University, 1966; M. S. 1968. Pathobiology.

The Evolution of the Rails of the South Atlantic Islands (Aves: Rallidae).

Stephen R. Parcher, of Oildale, Calif., B. A. Reed College, 1965. Mental Hygiene.

Observations on the Natural Histories of Six Madagascan Chamaeleontidae.

Israel Leo Praiss, of Haifa, Israel, M. D. Hebrew University Hadassah Medical School, 1959; M. P. H. 1965. Medical Care and Hospitals.

Study of Intra-Physician and Intra-Hospital Variations in Length of Patient Care.

Carol Louise Reinisch, of Long Island, N. Y., A. B. Cornell University, 1966. Pathobiology.

The Effect of Rous Sarcoma Virua on XC and Other Rat-Transformed Cell Lines.

Warren Walter Schultz, of Emporia, Kan., B. A. Kansas State Teachers College, 1964; M. S. 1966. Pathobiology.

Lysosomal Destruction of Cartilage Induced by a Virus Infection.

Ibrahim Bijli Syed, of Halifax, Canada, B. Sc. Veerasaiva College, 1960; M. Sc. Central College, Bangalore, 1962. Radiological Science.

Barium—135m for Skeletal Imaging.

Tesfa-Michael Tesfa-Yohannes, of Addis Ababa, Ethiopia, B. Sc. College of Agriculture, 1967. Pathobiology.

The Genetic Relationships of *Aedea S. Malayensis* and *Aedes Polynesiensis* Marks.

Robert M. Thorner, of Silver Spring, Md., B. S. New York University, 1952; M. B. A. Boston University, 1954; M. P. H. The Johns Hopkins University School of Hygiene and Public Health, 1957. Medical Care and Hospitals.

An Examination of the Problem of the Intensive Use of Hospital Services by a Relatively Small Proportion of the Population.

Jerry Leah Weston, of Arlington, Va., B. S. N. The Johns Hopkins University School of Nursing, 1955; M. P. H. Tulane University School of Public Health and Tropical Medicine, 1963. Medical Care and Hospitals.

Job Satisfaction Among Ex-Medical Corpsmen Employed on a Nursing Service and Their Acceptance by Female Nurses.

Duell Eugene Wood, of Las Cruces, New Mexico, B. S. New Mexico State University, 1961; M. S. 1963. Pathobiology.

Fatty Acid Metabolism of *Trypanosomo Cruzi*, Chagas, 1909 *In Vitro*.

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MASTERS OF HEALTH SCIENCES

in The School of Hygiene and Public Health

Heinz Werner Berendes, of Bethesda, Md., M. D. University of Goettingen, 1949; Dr. Med. University of Munich, 1952. Epidemiology.

Linda Rae Berman, of Baltimore, Md., B. S. University of Maryland, 1970. Epidemiology.

John Arboth Bramblett, of Chamblee, Ga., B. S. United States Naval Academy, 1968. Environmental Health.

Raymond Frank Clapp, of Absecon, N. J., B. S. C. E. Newark College of Engineering, 1956. Environmental Health.

Rainer R. Frentzel-Beyme, of Hamburg, Germany, M. D. Martin Luther University, 1964. Epidemiology.

Greg Graham Henderson, of Lutherville, Md., A. B. Dartmouth College, 1968. Biostatistics.

Suparnadi Praptasuganda, of Djarkarta, Indonesia, M. D. University of Indonesia Medical School, 1968. Epidemiology.

K. Ramachandran, of New Delhi, India, B. Sc. Madras University, 1950; M. S. Indian Statistical Institute, 1958. Biostatistics.

Manuel Jose Rengal, of Merida, Venezuela, B. S. C. E. University of Los Andes, 1965. Environmental Health.

Linda L. Robinson, of Baltimore, Md., B. S. Morgan State College, 1965. Environmental Health.

Belavadi Shankaranarayana, of Belavadi, South India, B. Sc. Maharaja College, B. Sc. University of Mysore, 1960; M. Sc. 1961. Biostatistics.

Istvan Takacs, of Chicago, Ill., B. S. C. E. University of Nebraska, 1962. Environmental Health.

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MASTERS OF PUBLIC HEALTH

in The School of Hygiene and Public Health

Joseph Olufunso Adebiyi, of Lagos, Nigeria, M. B. Ch. B. University of Glasgow, 1966.

Graciela Solis de Alarcón, of Lima, Peru, M. D. Universidad Peruana Cayetano Heredia, 1967.

Renato D. Alarcón-Guzmán, of Lima, Peru, M. D. Universidad Peruana Cayetano Heredia, 1966.

John Charles Alexander, of St. Louis, Mo., B. S. St. Francis College, 1965; M. D. St. Louis University School of Medicine, 1970.

Krita Apibunyopas, of Bangkok, Thailand, M. D. Chulalongkorn Hospital Medical School, 1967.

Haroutune Krikor Armenian, of Beirut, Lebanon, B. S. American University, Beirut, 1964; M. D. 1968.

Kevin T. Avery, of Belmont, Mass., A. B. College of the Holy Cross, 1965; D. M. D. Tufts Dental School, 1969.

Juan M. Baertl, of Lima, Peru, M. D. San Marcos University School of Medicine, 1953.

Salvacion Guysayko Bailon, of Quezon City, Philippines, B. S. N. University of the Philippines College of Nursing, 1964; M. Ed. University of the Philippines Graduate College of Education, 1971.

Harry Bass, of Baltimore, Md., B. S. University of Maryland School of Pharmacy, 1958.

Robert Aaron Benjamin, of Yonkers, N. Y., B. S. City College of New York, 1964; M. D. University of Kentucky, 1970.

Richard L. Berkowitz, of New York, N. Y., B. A. Cornell University, 1961; M. D. New York University School of Medicine, 1965.

Robert Frank Biehl, of Hampstead, N. Y., B. S. Massachusetts Institute of Technology, 1956; M. D. Harvard Medical School, 1960.

Peggy Ann Brooks, of Baltimore, Md., B. A. Goucher College, 1970.

Ellis Alindo D'Arrigo Busnello, of Rio Grande do Sul, Brazil, M. D. Universidade do Rio Grande do Sul School of Medicine, 1955.

Claudette Virginia Campbell, of Philadelphia, Pa., B. S. N. University of Pennsylvania School of Nursing, 1966.

Arnold John Capute, of Baltimore, Md., B. S. Queens College, 1945; M. D. Hahnemann Medical College, 1947.

Verne E. Chaney, Jr., of San Francisco, Calif., B. S. Virginia Military Institute, 1951; M. D. The Johns Hopkins University School of Medicine, 1948.

Ann Marie Claffey, of Philadelphia, Pa., A. A. Gwynedd-Mercy College, 1964; B. S. N. Villanova University, 1968.

Mary Blaisdell Cooper, of New York, N. Y., A. B. Earlham College, 1961.

Angel Cordano, of Lima, Peru, M. D. San Marcos University, 1954.

Brenda Ann Cosgrove, of New York, N. Y., B. S. N. St. John's University, 1963.

Timothy Allen Crofton, of Adelphia, Md., B. A. University of Maryland, 1953.

Kenneth Eugene Dixon, of Stamford, Conn., B. S. Holy Cross College, 1966; M. D. Tufts University Medical School, 1970.

Boonchuay Dulyasukdi, of Bangkok, Thailand, M. D. University of Medical Sciences, 1964.

Theresa Ann Dupuis, of Berlin, N. H., R. N. St. Louis Hospital, 1949; B. S. N. University of California, 1957.

Zack Armand Ein, of Palos Verdes Estates, Calif., B. A. New York University, 1954; M. D. Duke Medical School, 1960.

Daniel Orozco Elio-Calvo, of La Paz, Bolivia, B. S. Colegio "Don Bosco," 1961; M. D. Universidad Mayor de San Andrés, 1969.

Judith Davonne Fetters, of Jacksonville, Fla., B. S. N. Florida State University, 1966.

Eric Michael Fine, of Baltimore, Md., A. A. George Washington University, 1962; M. D. University of Maryland, 1967.

Ann McClung Fonville, of Glen Ferris, W. Va., B. S. N. West Virginia University, 1969.

Daniel Egbert Fountain, of Homer, N. Y., B. S. Colgate University, 1952; M. D. University of Rochester, 1956.

Mary Stang Furth, of Baltimore, Md., B. S. University of Maryland, 1953; M. D., 1957.

Irma Elaine Givens, of Baltimore, Md., B. S. Hampton Institute, 1952.

Aldemar Gomez, of Cundinamarca, Colombia, M. D. University of Caldas Manizales, 1961.

Mary Claudia Graf, of Mobile, Ala., B. S. N. Mercy College of Detroit, 1965.

Susan M. Horowitz, of McClean, Va., B. S. Mercyhurst College, 1959.

Mary Weldene Hostler, of Bloomsburg, Pa., A. A. Graceland College, 1966; B. S. N. University of Pennsylvania, 1968.

Dinah Ekundayo Jarrett, of Freetown, Sierra Leone, M. B. Ch. B. St. Andrews University, 1961; D. R. C. O. G. London Post-Graduate, 1964; M. R. C. O. G. Medical Institute School of Obstetrics and Gynecology, 1968.

Luz Esperanza Jefferson, of Lima, Peru, M. D. Universidad Mayor de San Marcos, 1962.

Doris Jean Jenkins, of Severna Park, Md., B. S. Pennsylvania State University, 1962.

Michel Jutras, of Saigon, Viet Nam, B. A. College Mont-Saint-Louis, 1958; M. D. University of Montreal, 1964.

Devdass Dattatraya Karmarkar, of Maharashtra, India, B. A. J. S. S. College Dharwar, 1963; M. B. B. S. Kastturba Medical College, 1967; M. B. B. S. Armed Forces Medical College, 1970.

Charlotte King Kaufman, of Baltimore, Md., A. B. Goucher College, 1969.

Beatrice Schneck Kolchin, of Aberdeen, Md., B. S. N. Syracuse University, 1955.

Richard Tsukasa Kotomori, of Wheaton, Md., A. B. Harvard College, 1962; M. D. Howard University Medical School, 1966.

Paulus Laoda, of East Java, Indonesia, M. D. Medical Faculty, 1963.

Lorrin Lau, of Honolulu, Hawaii, A. B. Harvard College, 1954; M. D. The Johns Hopkins University School of Medicine, 1958.

Robert Henry Lebow, of Hillside, N. J., A. B. Harvard College, 1962; M. D. The Johns Hopkins University School of Medicine, 1966.

Ginny Bailey Levene, of Baltimore, Md., B. A. The Johns Hopkins University, 1967; M. D., 1970.

Ronald David Luff, of Bethlehem, Pa., B. A. Lehigh University, 1969.

James Michael Lynch, of Chicago, Ill., B. S. DePaul University, 1959; M. D. Stritch School of Medicine, 1963.

Bhaskar Mahanti, of Andhra Pradesh, India, M. B. B. S. Andhra Medical College, 1953; D. P. H. All India Institute of Hygiene and Public Health, 1957.

William James Marek, of Baltimore, Md., B. S. University of Maryland, 1960; M. D., 1966.

Robert Charles McDonnell, of Westmoreland, Pa., B. S. University of Pittsburgh, 1966.

Carolyn J. McKay, of Denver, Colo., B. A. University of Minnesota, 1965; M. D., 1968.

Maureen Grace Meehan, of Farmingdale, N. Y., B. S. Niagara University, 1970.

Aurabhan Meksupa, of Bangkok, Thailand, M. D. Siriraj Hospital Medical School, 1965.

Robert James Melton, of Seattle, Wash., A. B. Harvard College, 1963; M. D. University of Washington School of Medicine, 1968.

Jeffrey Cyrus Merrill, of New York, N. Y., B. A. The Johns Hopkins University, 1964.

George Daniel Miller, of Mullins, S. C., B. S. Tennessee State University, 1963; Ph. D. The University of Iowa, 1970.

Petar Ivanov Mintchev, of Sofia, Bulgaria, M. D. Higher Medical Institute, 1946.

Elizabeth Mitchell, of Belfast, Northern Ireland, B. Sc. Columbia University, 1960.

Jimmy Ray Mitchell, of Pine Ridge, S. D., B. S. University of Mississippi, 1964.

Allen Wesley Morrisey, of Needham, Mass., B. A. University of Connecticut, 1952; M. D. New York Medical College, 1957.

Parvin Parsipour Naghibi, of Shiraz, Iran, M. D. Pahlavi University, 1965.

Darrell Dean Newkirk, of Irving, Texas, B. S. University of Arkansas, 1964; M. D. Tulane University Medical School, 1967.

Patricia Aqui Niles, of Washington, D. C., B. S. Columbia Union College, 1964; D. D. S. Howard University College of Dentistry, 1970.

Abraham Michael Yozaburo Nomura, of Honolulu, Hawaii, B. S. John Carroll University, 1962; M. D. Loyola Medical School, 1966.

Isadore Otto Peppe, of Clarksville, Tenn., B. S. Tennessee Polytechnic Institute, 1953; D. D. S. Georgetown University, 1959.

Allan Perez, of Hollywood, Fla., M. D. Havana University Medical School, 1960.

Bernard Raymond Rappaport, of Washington, D. C., B. S. George Washington University, 1952; D. D. S. Howard University, 1957.

Adel Chahine Rayyis, of Aley, Lebanon, B. S. American University of Beirut, 1962; M. D., 1967.

Ronald Charles Richter, of Baltimore, Md., B. S. University of Pittsburg, 1966; M. D. New York University School of Medicine, 1970.

Humberto Vicente Rodriguez-Moreno, of Aragua, Venezuela, C. E. University Central de Venezuela, 1967.

Luke Robert Rovin, of Port Moresby, New Guinea, D. M. Papuan Medical College, 1965; C. P. H. University of the Philippines Institute of Hygiene, 1969; D. T. M. & H. Faculty of Tropical Medicine University Medical School, 1969.

Sylvan Ross Ruark, of Tonasket, Wash., B. S. University of Washington, 1961; M. D., 1964.

Robert Culver Rutherford, of San Francisco, Calif., B. A. University of Washington, 1964; M. D. Harvard Medical School, 1968.

Anjali Saha, of New Delhia, India, M. B. B. S. Lady Hardinge Medical College, 1958; D. P. H. Royal Institute of Hygiene and Public Health, 1961; M. D. Lady Hardinge Medical College, 1970.

Baruni Samal, of Orissa, India, M. B. B. S. Lady Hardinge Medical College, 1966.

Roy Henry Schaefer, of Independence, Mo., A. A. Graceland College, 1952; B. A. University of Missouri, 1954; D. D. S. University of Missouri School of Dentistry, 1957.

Mohammad Shams Ardekani, of Akron, Ohio, M. D. Pahlavi Medical School, 1964.

Robert Shaw, of Goshen, N. J., B. S. Ursinus College, 1966; M. D. Hahnemann Medical College, 1970.

James Donald Shelton, of Norfolk, Va., A. B. Oberlin College, 1969.

Dorothea Hildegard Elsbeth Sich, of Stuttgart Gerockstr, Germany, M. D. Humboldt University Medical School, 1957.

Ruth Harris Singer, of Baltimore, Md., A. B. University of Pennsylvania, 1963; M. D. State University of New York Downstate Medical Center, 1968.

Steven Lawrence Solter, of San Francisco, Calif., A. B. University of California, 1965; M. D. Stanford Medical School, 1970.

Elias Salim Srouji, of Beirut, Lebanon, M. D. School of Medicine American University of Beirut, 1944.

Charles Henry Steinmetz, of Baltimore, Md., A. B. Indiana University, 1950; Ph. D., 1953; M. D. University of Cincinnati, 1960.

George Stuehler, Jr., of Baltimore, Md., B. E. S. The Johns Hopkins University, 1962; M. B. A. Wharton Graduate University of Pennsylvania, 1966.

Moyses Szklo, of Guanabara, Brazil, M. D. School of Medicine Sciences of the University of the State of Guanabara, 1963.

Harbans Singh Takulia, of Ludhiana, India, M. A. Delhi School of Social Work, 1953; M. A. Punjab University College, 1950.

Sushila Bahl Takulia, of Punjab, India, F. Sc. Christian Medical College, Ludhiana, 1948; L. M. S., 1952.

Mary Talbott Thoms, of Baltimore, Md., R. N. Union Memorial Hospital, 1956; B. S. N. Western Reserve University, 1962; M. S. N. University of Pennsylvania, 1963.

Sheila Vaidyanathan, of Maduranthakam, India, M. B. B. S. Madras Medical College, 1956; I. C. M. R. School of Tropical Medicine, 1960; D. T. M. & H. School of Tropical Medicine and Hygiene, 1964.

Barlow Jacob Wagman, of Silver Spring, Md., B. S. George Washington University, 1953; D. D. S. Howard University, 1962.

Marcus Walker, of New York, N. Y., B. S. Teachers College, 1957; M. A. Columbia University, 1959.

Roger Bruce White, of Pasadena, Md., A. B. West Virginia Wesleyan College, 1962; M. S. W., 1964.

Connie Jo Worthington, of Fresno, Calif., A. S. Reedley College, 1964; B. S. School of Nursing University of California, 1967.

Aurora Santos Yapchiongco, of Quezon City, Philippines, B. S. N. Philippines Women's University, 1954; M. A. N. University of the Philippines, 1964.

Paul Timothy Yoder, of Milford, Del., B. S. East Menn. College, 1950; M. D. George Washington University, 1955.

Whitney Blair Young, of Ogden, Utah, A. S. Weber State College, 1953; B. S. University of Utah, 1958; M. D. Kansas University School of Medicine, 1963.

Henry Dearborn Ziegler, of Baltimore, Md., B. A. The Johns Hopkins University, 1966; M. D. McGill University, 1970.

Carole Rodien Zussman, of Randallstown, Md., A. A. New York City Community College, 1961; B. S. City College of New York, 1963; Sc. M., 1965; Ph. D. University of Massachusetts, 1968.

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DOCTORS OF PUBLIC HEALTH

in The School of Hygiene and Public Health

Asfaw Desta, of Nekemte, Ethiopia, B. S. C. American University of Beirut, 1961; M. P. H. University of California, 1965. International Health.

National Health Planning in Ethiopia.

James Powell Ganley, of Joppa, Md., B. S. Mount Saint Mary's College, 1959; M. D. Georgetown University School of Medicine, 1963; M. P. H. The Johns Hopkins University School of Hygiene and Public Health, 1969. Epidemiology.

Epidemiologic Characteristics of Presumed Ocular Histoplasmosis.

David Bartlett Thomas, of Baltimore, Md., B. S. University of Washington, 1959; M. D. University of Washington School of Medicine, 1963; M. P. H. The Johns Hopkins University School of Hygiene and Public Health, 1969. Epidemiology.

Oral Contraceptives and Cervical Neoplasia.

John Wellman, of Detroit, Mich., B. A. Wayne State University, 1959; M. A. University of Kansas, 1962; M. D. University of Kansas School of Medicine, 1967; M. P. H. The Johns Hopkins University School of Hygiene and Public Health. International Health.

The Gbaja Family Health Nurse Project, Lagos, Nigeria, 1967-1970; An Examination of its Family Planning Impact.

Syed Aqa Zafir, of Karachi, Pakistan, M. B. B. S. K. E. Medical College, 1949; M. P. H. Harvard School of Public Health, 1958. Population Dynamics.

Effectiveness of Utilization of Training Abroad in Population Dynamics and Family Planning.

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DOCTORS OF PHILOSOPHY

in The School of Hygiene and Public Health

Jerry Franklin Green, of Baltimore, Md., B. A. Rollins College, 1963; B. S. 1963. Environmental Medicine.

Pressure Flow Relationships in the Excised Perfused Canine Abdominal Aorta.

Jay Harvey Herson, of Buffalo, N. Y., B. B. A. The City College of New York, 1964; M. S. Rutgers—The State University, 1966. Biostatistics.

Some Robust Point Estimation Sampling Strategies Under Certain Linear Regression Models.

Young J. Kim, of Baltimore, Md., B. S. The Seoul National University, 1958; M. S. Indiana University, 1963. Biostatistics.

Some Estimation Problems in Branching Processes.

George Frederick Koob, of Chambersburg, Pa., B. S. The Pennsylvania State University, 1969. Environmental Medicine.

The Effect of Hypoxia on Hypothalamic Mechanisms.

Mark Robertson Montgomery, of Cincinnati, Ohio, B. S. Purdue University, 1967. Environmental Medicine.

Effect of Carbon Monoxide Inhalation on *In Vivo* Drug Metabolism.

Stanton Newmaris Parmeter, of Beaverton, Ore., B. A. Eastern Washington State College, 1962; M. S. Washington State University, 1965. Pathobiology.

The Effects of Temperature and Humidity on the Development of *H. diminuta* in *vivo*.

Aileen Aiko Ritchie, of West Sacramento, Calif., A. B. University of California, 1967; M. S. Indiana University Medical Center, 1969. Environmental Medicine.

In Vitro Evidence for the Vesicular Synthesis of Acetylcholine.

Ellen Marie Rogus, of Baltimore, Md., B. S. The Johns Hopkins University, 1965; M. L. A. 1968. Environmental Medicine.

Sodium Flux and Distribution in Skeletal Muscle. Role of Sarcoplasm and Sarcoplasmic Reticulum in a Two-Component Model.

Satya Prakash Sangal, of Saharapur, India, B. Sc. Agra University, 1950; M. Sc. 1952. Biostatistics.

Family Planning Attitude and Behavior and the Resultant Impact on Health Services.

Roberto Pablo Schlatter, of Santiago, Chile, D. V. M., University of Chile, 1967.

Eleanor Carey Thomas, of Baltimore, Md., A. B. Smith College, 1960. Biostatistics.

A Class of Models for Bivariate Point Processes.

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MASTERS OF ARTS

in The School of Advanced International Studies

Peter Frederick Allgeier, of West Orange, N. J., B. A. Brown University, 1969.

Brian Ellis Anderson, of Logan, Utah, B. A. Utah State University, 1968.

Raymond Vincent Arnaudo, of Mountain View, Calif., B. A. Stanford University, 1969.

Iain Stewart Baird, of Waldwick, N. J., B. A. The Johns Hopkins University, 1968.

Bruce Baker, of Gary, Ind., B. A. The Johns Hopkins University, 1971.

Francois-George Pierre Barbier, of Paris, France, Diploma Institute d'Etude Politique, 1968.

Jeffrey William Barrett, of Foxboro, Mass., B. A. Notre Dame University, 1966.

Franklin M. Berger, of Princeton, N. J., B. A. The Johns Hopkins University, 1971.

Gene Ernest Bigler II, of San Bernardino, Calif., B. A. University of the Pacific, 1967.

Ralph Walter Bild, of West Bend, Wisc., B. A. Oberlin College, 1970.

Aklog Birara, of Debre Tabor, Ethiopia, B. A. Earlham College, 1970.

Vaughn Richard Blake, of San Francisco, Calif., B. A. University of Redlands, 1970.

William Dennis Blaylock, of Hidden Hills, Calif., B. A. University of California, Los Angeles, 1970.

Wolf Isaac Blitzer, of Williamsville, N. Y., B. A. State University of New York, Buffalo, 1970.

Gordon Raymond Boe, of Sioux Falls, S. D., B. A. Augustana College, 1968.

Philip Peters Bolton, of Cleveland, Ohio, B. A. Williams College, 1967.

Joey Bonner, of Pasadena, Calif., B. A. University of California, Berkeley, 1970.

John Stephen Borden, of Baltimore, Md., B. A. Franklin and Marshall College, 1968.

Bruce Edward Bouchard, of Tucson, Ariz., B. A. The Johns Hopkins University, 1971.

Gloria Elaine Bozeman, of E. St. Louis, Ill., B. A., Southern Illinois University, 1970.

Anita F. Brownstein, of Baltimore, Md., B. A. University of Maryland, 1968.

David Alan Brucato, of Mexico D. F., Mexico, B. A. Macalester College, 1970.

Jeffrey Joseph Buczacki, of Enfield, Conn., B. A. The Johns Hopkins University, 1971.

Richard Potter Burns, of Ormond Beach, Fla., B. A. Brown University, 1967.

Paul Decatur Butcher, of Baltimore, Md., B. A. Yale University, 1969.

Richard Arlington Cambridge, of Georgetown, Guyana, B. A. Macalester College, 1969.

Franz Andreas Cede, of Innsbruck, Austria, Dr. of Law University of Innsbruck, 1968.

Richard Leonard Collins, of Gales Ferry, Conn., B. A. University of Connecticut, 1970.

Roger Barry Cooper, of Shaker Heights, Ohio, B. A. Hiram College, 1970.

William Huntington Copenhaver, of Washington, D. C., B. S. L. Northwestern University, 1953, Ll. B., 1956; Ll. M. Harvard University, 1960.

Michael Goeffrey Crosthwaite, of Toronto, Canada, B. A. University of Toronto, 1966.

Brian Dean Curran, of Largo, Fla., B. S. F. S. Georgetown University, 1970.

Elizabeth Frances Davenport, of Bethesda, Md., B. A. Carleton College, 1970.

Ann Dorsey Day, of Virginia Beach, Va., B. A. Hollins College, 1968.

Luc De Smet, of Ghent, Belgium, Law Degree University of Ghent, 1969.

John Edmund Devine, of Ocean City, N. J., B. A. The Johns Hopkins University, 1969.

David Bryan Dlouhy, of Crosby, Texas, B. A. University of Texas, 1970.

Eve Duval, of Encino, Calif., B. A. University of California, Los Angeles, 1969.

John Alan Eckstein, of Iowa City, Iowa, B. A. University of Iowa, 1970.

Ann K. Eggleston, of Medina, Ohio, B. A. Middlebury College, 1970.

Carolyn Ann Emigh, of Seattle, Wash., B. A. Pitzer College, 1970.

Patrik Johan Engellau, of Stockholm, Sweden, Civil Engineer Diploma, Stockholm School of Economics, 1968.

Claudia Beth Engelman, of Trenton, N. J., B. A. Mount Holyoke College, 1970.

John Philip Evans, of Cheverly, Md., B. A. The Johns Hopkins University, 1971.

Peter Morris Fourt, of Arlington, Va., B. A. Kenyon College, 1967.

Frederic B. Francke, of Easton, Pa., B. A. The Johns Hopkins University, 1969.

Vasco Leonel de Sao Francisco Xavier Furtado Cabral, of Monte Estoril, Portugal, B. A. St. Joseph's College (India), 1954, Barrister-at-Law, Honorable Society of Lincoln's Inn (London), 1961, Licenciature, Instituto Superior de Ciencias Sociais (Lisbon), 1970.

Lawrence David Gilson, of Beverly Hills, Calif., B. A. Claremont Men's College, 1970.

Steven Charles Haas, of Leawood, Kansas, B. A. Stanford University, 1970.

Brian Shepard Hallman, of Falls Church, Va., B. A. College of William and Mary, 1969.

Eric Max Hameister, of Bashaw, Alberta, Canada, B. A. University of Alberta, 1970.

Lawrence M. Hannah, of New Westminster, B. C., Canada, B. A. Simon Fraser University, 1970.

Carol Margaret Harvey, of Bethesda, Md., B. A. Oberlin College, 1970.

Timothy John Hauser, of Pittsburgh, Pa., B. S. F. S. Georgetown University, 1970.

Linda Sue Hearne, of Oakland, Calif., B. A. University of California, Berkeley, 1970.

Steven Hecht, of Los Angeles, Calif., B. A. Occidental College, 1970.

Gerald Hillenbrand, of Chicago, Ill., B. A. College of Holy Cross, 1964; J. D. University of Chicago, 1967.

John Charles Holzman, of Washington, D. C., B. S. F. S. Georgetown University, 1967.

Anders Christian Hoppe, of Gentofte, Denmark, B. A. Drew University, 1970.

Elaine Alison Hubert, of Germantown, N. Y., B. A. Hood College, 1970.

Philip Samuel Jessup II, of Washington, D. C., B. A. Amherst College, 1967.

Peter Roff Johannson, of Vancouver, B. C., Canada, B. A. University of British Columbia, 1970.

Lawrence Oakley Johnson, of Far Hills, N. J., B. A. University of Denver, 1970.

Kenneth Raymond Johnston, of Downsview, Ontario, Canada, B. A. York University, 1969.

Russell Cornish Jones, of Houston, Texas, B. A. The Johns Hopkins University, 1972.

Jeffrey A. Katz, of New York, N. Y., B. A. The Johns Hopkins University, 1972.

Ernest Richard Keeton, of Austin, Texas, B. J. University of Texas, 1970.

Hans Albert Keller, of Shaker Heights, Ohio, B. A. Case Western Reserve University, 1970.

Janet Kelly, of Philadelphia, Pa., B. S. F. S., Georgetown University, 1969.

G. Alfred Kennedy, of Hillcrest Heights, Md., B. A. University of Oregon, 1968.

Roland Klaus, of Alexandria, Va., B. A. Queens College, 1969.

Angela U. Knippenberg, of Hameln, Germany, B. A. Bryn Mawr College, 1970.

Pieter Jan Kuyper, of Bloemendaal, The Netherlands, Ll. M. Leiden University, 1970.

Carlo La Porta, of Woodside, Calif., B. A. Indiana University, 1967.

Eric Jan Lapp, of Fairfax, Va., B. A. The American University, 1970.

James Anthony Larocco, of Chicago, Ill., B. A. University of Portland, 1970.

Richard Owen Lehmann, of Fresno, Calif., B. A. Oberlin College, 1970.

Gilbert Neal Lendenmann, of Nokesville, Va., B. S. F. S. Georgetown University, 1969.

Robert McDowell Lloyd, of Jamaica, N. Y., B. A. Queens College, 1967.

Dennis Powell Lockhart, of Bakersfield, Calif., B. A. Stanford University, 1968.

Carla N. Lofberg, of Chehalis, Wash., B. A. The American University, 1967.

Pavel Machala, of Prague, Czechoslovakia, B. A. Saint Olaf College, 1970.

Joan E. Mathewson, of San Jose, Calif., B. A. University of California, Berkeley, 1970.

Marlene Diana McKinley, of Philadelphia, Pa., B. A. Howard University, 1970.

James Megellas, of Fond Du Lac, Wisc., B. A. Ripon College, 1942.

Eric Daniel Kinne Melby, of Washington, D. C., B. A. Haverford College, 1970.

Brian Jeffery Mohler, of Schenectady, N. Y., B. A. The Johns Hopkins University, 1970.

John Vincent Moller, Jr., of Ho-Ho-Kus, N. J., B. A. Colgate University, 1970.

Ellen Kavanagh Moran, of Massapequa, N. Y., B. A. University of Massachusetts, 1970.

Serenella Morelli, of Ravenna, Italy, Degree in Law, University of Ferrara, 1969.

John Thomas Morken, of Minneapolis, Minn., B. A. Macalester College, 1970.

Paul Thomas Murphy, of Fairfield, Conn., B. A. Georgetown University, 1968.

Ronald Everett Myers, of Morristown, N. J., B. A. Occidental College, 1969.

Patrick Michael O'Brien, of McKeesport, Pa., B. A. The Catholic University of America, 1969.

Arturo Milton Ottolenghi, of Acqui Terme, Italy, B. A. The Johns Hopkins University, 1971.

Charla Greer Peavy, of Lufkin, Texas, B. A. University of Texas, 1970.

Robert Scot Perlin, of Kings Point, N. Y., B. A. Brandeis University, 1969.

Phan Thi Phung, of Saigon, Vietnam, B. A. Indiana University, 1970.

George R. Pugh, of Engelwood, Colo., B. A. The Johns Hopkins University, 1969.

Douglas K. Ramsey, of Los Angeles, Calif., B. A. University of California, Los Angeles, 1970.

Gary Phillip Ratner, of Chicago, Ill., B. A. Northwestern Univ., 1970.

Francis R. J. J. Rome, of Winterslag, Belgium, Kandidaat, St. Ignatius University, 1968, Licentiaat, 1970.

Daniel Rowland, of London, England, Ll. B. University of Leeds, 1969.

Malcolm Bruce Russell, of Williamsport, Pa., B. A. Columbia Union College, 1970.

Myron Paul Schamis, of Forest Hills, N. Y., B. A. The Johns Hopkins University, 1972.

David Bradley Schott, of Baltimore, Md., B. A. The George Washington University, 1966.

Doral Lynn Schweitzer, of Scotch Plains, N. J., B. A. Indiana University, 1970.

Katherine Anne Schwering, of Bethesda, Md., B. A. Northwestern University, 1970.

Cristobal David Senior, of Bogota, Columbia, Degree in Economics, National University of Columbia, 1965.

Keith Arnold Shangraw, Jr., of Belmont, Mass., B. A. University of Maryland, 1970.

Jonathan Showe, of Pittsburgh, Pa., B. A. Grinnell College, 1967.

Scott Gambrill Sinclair, of Carmel Valley, Calif., B. A. The Johns Hopkins University, 1971.

Martin Frederick Smith, of Brookville, Fla., B. A. Princeton University, 1969.

Scott Eric Smith, of Washington, D. C., B. A. The Johns Hopkins University, 1971.

Jeffrey Ward Stallings, of Atlanta, Ga., B. S. E. Princeton University, 1967.

Jacquelie Alicia Stark, of Lima, Peru, B. A. The American University, 1969.

Arthur Stein III, of Des Moines, Iowa, B. A. Tulane University, 1970.

John Francis Sterling, Jr., of Pelham Manor, N. Y., B. A. Colgate University, 1968.

Brian Eliot Sullam, of Honolulu, Hawaii, B. A. The Johns Hopkins University, 1971.

Carmen Cecilia Suro, of Chevy Chase, Md., B. A. Manhattanville College, 1969.

Michael Theodore Tilles, of Burbank, Calif., B. A. San Francisco State College, 1967.

Mohamed Jaward Tunis, of Freetown, Sierra Leone, B. A. College of Great Falls, 1970.

Saint Elmo Parlette Tyner II, of Mendon, Ohio, B. S. United States Military Academy, 1965.

Peter Wilhelmus van den Dungen, of Turnhout, Belgium, Licenciate St. Ignatius University, 1970.

Margaret E. Grant Vanderhye, of Park Ridge, Ill., B. A. Northwestern University, 1970.

Ir Joris Jacob Clemens Voorhoeve, of The Hague, Netherlands, M. A. Wageningen University, 1971.

David Goforth Wagner, of Wyomissing, Pa., B. A. The Johns Hopkins University, 1971.

James Gordon Wallar, of Columbus, Ohio, B. A. Ohio Wesleyan University, 1970.

Andrea Louise Watson, of Kingston, Mass., B. A. University of Massachusetts, 1969.

William Swanson Weems, of Raleigh, N. C., B. A. University of North Carolina, 1967.

Mildred Virginia Weiss, of Glenside, Pa., B. A. Pennsylvania State University, 1970.

Joan Stanley Whitmore (posthumous), of Vienna, Va., B. A. Vassar College, 1964.

John Michael Willingham, of Atlanta, Ga., B. A. Morehouse College, 1970.

Charles Townsend Wilson IV, of Buffalo, N. Y., B. A. Colgate University, 1970.

Sherman Bruce Wilson, of Ashland, Ore., B. A. Stanford University, 1970.

Maung Ba Win, of Rangoon, Burma, B. A. Kalamazoo College, 1969.

Rebecca Leigh Wright, of Smithfield, N. C., B. A. Vassar College, 1970.

Samuel Yohai, of Bogota, Colombia, Diploma, National University of Colombia, 1965.

Rinze Dirk Andries Zylstra, of Amersfoort, The Netherlands, B. B. A. The Netherlands School of Business, 1969; M. B. A. Kent State University, 1971.

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DOCTORS OF PHILOSOPHY

in The School of Advanced International Studies

Dennis John Amato, of Manhasset, N. Y., B. A. Boston College, 1966; M. A. School of Advanced International Studies, 1968.

Elections under International Auspices 1948-1970.

Gerrit Henry Argento, of Huntingdon Valley, Pa., B. A. Harvard University, 1963; M. A. School of Advanced International Studies, 1965.

The Social, Political, and Economic Impact of a Leading Enclave Export Industry: Bauxite and Jamaica, 1942-1968.

Constantinos Spiros Caretsos, of Athens, Greece, B. S. Columbia University, 1965; M. I. A., 1968; M. A. Stanford University, 1966.

The Triumph of Security and Order: The Politics of the Greco-American Alliance.

Douglas Franklin Garthoff, of Alexandria, Va., B. A. Princeton University, 1964; M. A. School of Advanced International Studies, 1966.

The Domestic Dimension of Soviet Foreign Policy: The Kremlin Debate on the Test Ban, October 1962-October 1963.

Walid Joseph Khadduri, of Baghdad, Iraq, B. A. Michigan State University, 1963; M. A. School of Advanced International Studies, 1965.

Social Background of Modern Iraqi Politics.

Thomas Melvin Magstadt, of Sioux Falls, S. D., B. A. Augustana College, 1966; M. A. School of Advanced International Studies, 1968.

NATO Nuclear-Sharing and Nonproliferation in Soviet Foreign Policy, 1960-1967.

Walter Kendall Myers, Jr., of Washington, D. C., B. A. Brown University, 1963; M. A. School of Advanced International Studies, 1966.

Appeasement: A Reappraisal.

William Talmadge Salisbury, of Oswego, N. Y., B. A. Swarthmore College, 1959; M. B. A. Columbia University, 1963; M. A. School of Advanced International Studies, 1967.

Spain and the Common Market: 1957-1967.

Kusol Varophas, of Bangkok, Thailand, B. S. F. S. Georgetown University, 1961; M. A. School of Advanced International Studies, 1963.

Traditional Institutions and Political Change in Thailand.

Edward Thomas Wilson, of Washington, D. C., B. A. Princeton University, 1963; B. Litt. St. Antony's College Oxford, 1966; M. A. School of Advanced International Studies, 1968.

Russian and Black Africa before World War II.

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DOCTORS OF MEDICINE

in the Faculty of Medicine

Robert Fredrick Aarstad, of Watertown, S. Dak., B. A. St. Olaf College, 1968; B. M. S. University of South Dakota School of Medicine, 1970.

Robert John Ancona, of Detroit, Mich., B. A., The Johns Hopkins University, 1969.

John Edward Anderson, of West Upton, Mass., B. A. College of the Holy Cross, 1968; B. M. S. Dartmouth Medical School, 1970.

Alexander Jehoschua Asch, of Forest Hills, N. Y., A. B. Princeton University, 1968.

David Alan Block, of Newport News, Va., B. A. Brandeis University, 1968.

Michael Steven Borzy, of Cleveland, Ohio, B. A. The Johns Hopkins University, 1969.

Dalius J. Briedis, of New York, N. Y., B. A. The Johns Hopkins University, 1969.

James Kingsbury Brown, of Kalamazoo, Mich., B. A. Yale University, 1968.

Joseph F. Burke, Jr., of Dorchester, Mass., B. A. Boston University, 1968.

Edward James Busick, Jr., of Franklin Square, N. Y., B. A. The Johns Hopkins University, 1969.

Louis James Calli, Jr., of North Vernon, Ind., B. A. The Johns Hopkins University, 1968.

Mary Ann Carlson, of Montrose, Col., B. A. University of North Dakota, 1968; B. M. S. University of North Dakota School of Medicine, 1970.

Joseph A. Carlton, of Grambling, La., B. A. The Johns Hopkins University, 1968.

James Forrest Carroll, of Santa Ynez, Calif., B. A. University of California (San Diego), 1968.

Donn Alan Chambers, of Atlanta, Ga., B. A. The Johns Hopkins University, 1969.

Charles Shih-Cheng Chang, of Baltimore, Md., B. A. The Johns Hopkins University, 1967.

David Russell Cochrane, of Kansas City, Mo., A. B. Harvard College, 1968.

Robert E. Cohen, of Baltimore, Md., A. B. Cornell University, 1968.

Ronald Jay Cohen, of Pittsburgh, Pa., B. A. University of Pittsburgh, 1968.

Marilee Carver Shepler Cole, of Towson, Md., B. S. Bucknell University, 1968.

Mark Maxwell Danney, of Cheektowaga, N. Y., B. S. United States Air Force Academy, 1968.

Thomas Dennis Davin, of Fitchburg, Mass., B. A. College of the Holy Cross, 1968; B. M. S. Dartmouth Medical School, 1970.

Joseph Raymond DePaulo, Jr., of Charleston, W. Va., B. S. Xavier University, 1968.

Charles Hallam Diggs, of Springfield, Ohio, B. A. DePauw University, 1968.

Lisa Marie Dunkle, of Kirkwood, Mo., B. A. Wellesley College, 1968.

Stanislaw M. Dyrcz-Freeman, of Gloversville, N. Y., A. B. Harvard College, 1968.

Anne Coleman Egbert, of Baltimore, Md., B. A. The Johns Hopkins University, 1969.

Elihu Harris Estey, of Brooklyn, N. Y., A. B. Yale University, 1968.

Michael Ference III, of Dearborn, Mich., A. B. Princeton University, 1968.

Frederick L. Ferris III, of Baltimore, Md., A. B. Princeton University, 1968.

Michael Robin Flick, of Mexico City, Mexico, B. S. Duke University, 1968.

Wallace Bruce Fye, of Yardley, Pa., B. A. The Johns Hopkins University, 1968.

Paul Geshelin, of Los Angeles, Calif., B. A. The Johns Hopkins University, 1969.

Charles George Gianaris II, of Dracut, Mass., A. B. Bowdoin College, 1968.

Ronald Lawrence Ginsberg, of Baltimore, Md., B. A. The Johns Hopkins University, 1968.

Paul Edward Gormley, of Baltimore, Md., B. E. S. The Johns Hopkins University, 1968.

Mary Elizabeth Guinan, of New York, N. Y., B. A. Hunter College, 1961; Ph. D. University of Texas, 1969.

Gary Robert Paiia Gutcher, of Kaneohe, Hawaii, B. A. Stanford University, 1966.

Ernest David Gutmann, of New York, N. Y., A. B. Princeton University, 1968.

Kenneth Robert Hande, of Minneapolis, Minn., A. B. Princeton University, 1968.

John Taylor Hayford, Jr., of Midland Park, N. J., B. A. The Johns Hopkins University, 1968.

Erik Lane Hewlett, of Oklahoma City, Okla., B. A. Westminster College, 1968.

Morley Donald Hollenberg, of Winnipeg, Manitoba, Canada, B. S. University of Manitoba, 1963; M. S. 1964; Ph. D. Oxford University, 1967.

Susan Margaret Ice, of Reading, Pa., B. A. The Johns Hopkins University, 1969.

Nicholas Taylor Iliff, of Arnold, Md., B. A. Williams College, 1968.

James William Isaacs, of Baltimore, Md., A. B. Harvard College, 1968.

Joseph Lewis Izzo, Jr., of Rochester, N. Y., A. B. Princeton University, 1968.

Donald Seyler Jacobs, of Cincinnati, Ohio, A. B. Cornell University, 1968.

Robert Edward Jacoby II, of Topeka, Kan., B. A. University of Kansas, 1968.

Richard Scott Johannes, of Marshfield, Wisc., B. A. University of Wisconsin, 1968.

Charles McCoy Johnson III, of Summit, N. J., B. S. American University, 1968.

Michael Steven Katz, of Albuquerque, N. Mex., B. A. Stanford University, 1968.

Shahram Khoshbin, of Tehran, Iran, B. S. American University of Beirut, 1968.

Donald Lewis Lappé, of Millburn, N. J., B. S. E. Princeton University, 1968.

Thomas Walter Lawhorne, Jr., of Sylvester, Ga., B. S. University of Georgia, 1968.

James W. Lehninger, of Baltimore, Md., B. A. Wesleyan University, 1968.

Alan Jerome Levene, of Louisville, Ky., B. A. The Johns Hopkins University, 1969.

James Jonathan Lipsky, of Keene, N. H., A. B. Dartmouth College, 1968.

Gerald Eli Loeb, of Baltimore, Md., B. A. The Johns Hopkins University, 1969.

Mark Arnold Lucas, of Plainwell, Mich., B. S. University of Michigan, 1968.

Dennis Paul Malinak, of Valley Stream, N. Y., B. S. Michigan State University, 1968.

William Michael Maniscalco, of Westfield, Mass., A. B. University of Massachusetts, 1968.

Marc Eliot Mann, of Palo Alto, Calif., A. B. Harvard College, 1968.

John William Melski, of New Milford, N. J., A. B. Dartmouth College, 1968.

James Harris Mersey, of Lynbrook, N. J., B. A. Amherst College, 1968.

Thomas Robert Miller, of Findlay, Ohio, B. A. Wesleyan University, 1968.

Stephen James Mohr, of Wheaton, Ill., B. A. The Johns Hopkins University, 1968.

Stephen Vernia Neville, of East Liverpool, Ohio, A. B. Princeton University, 1968.

Arthur Charles Nielsen III, of Winnetka, Ill., A. B. Harvard College, 1968.

Robert Neal Nishimura, of Spokane, Wash., B. S. Washington State University, 1968.

Gregory O'Keefe III, of Vinal Haven, Maine, B. A. Princeton University, 1968; B. M. S. Dartmouth Medical School, 1970.

Camille Baller Olson, of Brookline, Mass., B. A. Wellesley College, 1959; Ph. D. Harvard College, 1965.

Jonathan Edward Pederson, of Minneapolis, Minn., B. A. Augsburg College, 1968; B. M. S. University of South Dakota School of Medicine, 1970.

Robert John Petrokubi, of Charleston, W. Va., B. S. Virginia Polytechnic Institute, 1966; M. S. Massachusetts Institute of Technology, 1968.

Walter C. Prehn, of Palo Alto, Calif., A. B. Harvard College, 1968.

Terry Goddard Rehn, of Monmouth, Ill., B. A. DePauw University, 1968.

Jarrett Wood Henry Richardson III, of Columbia, S. C., B. S. Samford University, 1968.

John Ballance Richardson, of Memphis, Tenn., A. B. Princeton University, 1968.

Ralph W. Rogers III, of New Kensington, Pa., B. A. The Johns Hopkins University, 1969.

Timothy A. Rogge, of Toledo, Ohio, B. S. University of Toledo, 1968.

William Arthur Rohde, of Nashua, Iowa, B. A. Cornell College, 1968.

James Ralph Schreiber, of Baltimore, Md., B. A. Rice University, 1968.

Daniel Adam Sherman, of Searingtown, N. Y., B. A. The Johns Hopkins University, 1969.

Michael J. Shortsleeve, of Newton Centre, Mass., B. A. College of the Holy Cross, 1968; B. M. S. Dartmouth Medical School, 1970.

Robert James Spence, of Delmar, N. Y., B. A. The Johns Hopkins University, 1969.

Bruce Keith Stechmiller, of Gainesville, Fla., B. S. University of Florida, 1968.

Karen Blanchard Strauss, of Baltimore, Md., B. A. The Johns Hopkins University, 1969.

Robert G. Strauss, of Baltimore, Md., A. B. Loyola University, 1966.

Timothy L. Thar, of Decatur, Mich., B. S. Michigan State University, 1968.

Eileen Patrice Gallagher Vining, of Brooklyn, N. Y., B. A. Vassar College, 1968.

Mark K. Wedel, of Minneapolis, Minn., B. A. Valparaiso University, 1968.

Cheryl Ermann Weinstein, of New York, N. Y., B. A. Mt. Holyoke College, 1966.

Elizabeth Lancaster Wilder, of Florence Ala., B. A. Vanderbilt University, 1968.

Michael Lillie Wilder, of Spokane, Wash., B. A. University of Washington, 1968.

Alan Ross Wofsey, of Stamford, Conn., A. B. Yale University, 1968.

Gary Paul Wormser, of Mercersburg, Pa., B. A. University of Pennsylvania, 1968.

Sing-Yung Wu, of Seattle, Wash., B. M. D. National Taiwan University School of Dentistry, 1963.

Eric Alan Wulfsberg, of Baltimore, Md., B. A. Luther College, 1968.

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MASTERS OF ARTS

in the Faculty of Medicine

Sheila Elise Ford, of Falls Church, Va., B. F. A. Art Center College of Design, 1970. Art as Applied to Medicine.

A Descriptive Study of the Variation Occurring in *Aedes Stegomyia scutellaris* from Tafahi, and Hybridization Results Occurring between *Aedes* of Tafahi and *Aedes polynesiensis.*

Kenneth Marc Ludmerer, of Long Beach, Calif., A. B. Harvard College, 1968. History of Medicine.

Genetics and American Society.

Alice Jane Mellors Scheff, of Rye, N. Y., A. B. Vassar College, 1967. Microbiology.

On the Mechanisms of Inflammatory and Cytotoxic Reactions Mediated by Lymphoid Cells: Possible Role of Complement.

Hedwig Ann Seski, of Grosse Pointe, Mich., B. A. Newton College, 1970. Art as Applied to Medicine.

An Atlas of Stages in the Morphogenesis of the Heart in the Chick Embryo.

Linda K. Ziemer, of Adelphi, Md., A. B. Syracuse University, 1970. Art as Applied to Medicine.

An Atlas of the Skeleton and Musculature of the Shoulder, Arm, and Forearm of *Pithecia monacha.*

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DOCTORS OF PHILOSOPHY

in The Faculty of Medicine

David Paul Beck, of Owings Mills, Md., B. A. Princeton University, 1966. Physiological Chemistry.

Morphogenesis in *Neurospora crassa*: Cytological and Biochemical Aspects of Mitochondrial Development.

William Cieplinski, of Baltimore, Md., M. D. National University of Mexico, 1964. Physiological Chemistry.

Studies of Histone V (F2c) of Chicken Blood and Erythropoetic System.

Kathleen Janet Danna, of Beaumont, Texas, B. S. New Mexico Institute of Mining and Technology, 1967. Microbiology.

Specific Cleavage of SV40 DNA by Restriction Endonuclease from *Hemophilus influenzae*.

Eileen Anne Friedman, of Baltimore, Md., B. A. New York University, 1967. Microbiology.

An ATP-dependent Deoxyribonuclease from *Hemophilus influenzae* Rd: Purification and Properties.

Marilyn Sue Kozak, of Akron, Ohio, B. S. Marygrove College, 1965. Microbiology.

Studies on the Regulation of Coliphage MS2 Protein Synthesis.

Judith T. Zeffert Levy, of Baltimore, Md., A. B. Goucher College, 1967. Physiological Chemistry.

A Thermodynamic Analysis of the Thermal-Unfolding Transition of Yeast Phenylalanine-Specific Transfer Ribonucleic Acid.

Christine Milcarek, of Pittsburgh, Pa., B. S. Duquesne University, 1968. Microbiology.

Isolation and Characterization of *Escherichia coli* Mutants with Altered Exonuclease III Activities.

John Baily Moore, Jr., of Baltimore, Md., B. S. Wake Forest College, 1966; M. S. Purdue University, 1968. Physiological Chemistry.

Chemical Modification Studies on Glyceraldehyde 3-Phosphate Dehydrogenase: I. Use of 1, 3-Dibromoacetone as a Potential Crosslinking Reagent. II. Selective Chemical Modification of Cysteine-153.

Douglas McCrea Moore, of Baltimore, Md., B. S. University of Delaware, 1967. Microbiology.

The Biosynthesis of Rabbit Leucocytic Pyrogen.

Ray Albert Weigand, of Baltimore, Md., B. S. A. Purdue University, 1967. Physiological Chemistry.

Extra Membranes in *Escherichia coli* Ollla: Their Formation, Isolation, and Partial Characterization.

Stephen Lewis Zimmer, of Fairfield, Conn., B. A. University of Connecticut, 1965. Physiological Chemistry.

Thermodynamic Studies Concerning the Interaction of Water with Biological Macromolecules.

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MASTERS OF SCIENCE IN ENGINEERING

in the Faculty of Arts and Sciences

Suleyman Olatunji Adeyemi, of Offa, Nigeria. Geography & Environmental Engineering.

Stabilization Ponds: *Parameters Affecting Their Performance.*

Michel Benarosh, of Bayonne, France, Diploma d'Ingenieur Central School of Arts & Manufactures, 1969. Operations Research and Industrial Engineering.

Barry Ira Castleman, of Baltimore, Md., B. E. S. The Johns Hopkins University, 1968. Geography & Environmental Engineering.

Asbestos—Effects on Health.

John Allen Eastman, of Yellow Springs, Ohio, B. S. Antioch College, 1970. Geography and Environmental Engineering.

Extensions of the Linear Decision Rule in Reservoir Design and Operation.

Antolin Julian Gonzalez-del-Valle, of Wilmington, N. C., B. A. Wilmington College, N. C., 1969. Electrical Engineering.

Sa-Man Hong, of Seoul, Korea, B. S. Seoul National University, 1965. Operations Research and Industrial Engineering.

Lawrence Carter Kohlenstein, of Baltimore, Md., B. E. S. The Johns Hopkins University, 1962. Electrical Engineering.

Observer's Performance in Detecting Lesions in Radionuclide Scans.

Ronald Gary Lepson, of Baltimore, Md., B. S. C. E. University of Maryland, 1962. Geography and Environmental Engineering.

A Review and Evaluation of Grit Chamber Design.

Mart Peep, of Baltimore, Md., B. E. S. The Johns Hopkins University, 1965. Electrical Engineering.

Small Gravity Waves on Crests and Troughs of Large Gravity Waves—A Statistical Energy Comparison.

Ronald Anthony Schaefer, of Cleveland, Ohio, B. S. University of Notre Dame, 1970. Computer Science.

Barbara Anne Koster Sullivan, of Manhasset, N. Y., B. A. The Catholic University of America, 1969. Geography and Environmental Engineering.

The Effect of Entrainment on Several Species of Microcrustacea.

Andres Talts, of Arnold, Md., B. S. Queens College, 1964. Geography and Environmental Engineering.

The Electrochemical Removal of Phosphate from Waste-water.

Monica Ann Yoshinaga, of St. Charles, Ill., B. A. College of the Holy Names, 1969. Mechanics.

A Mathematical Model of Maternal Blood Flow in the Intervillous Space of the Placenta.

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MASTERS OF ARTS IN TEACHING

in the Faculty of Arts and Sciences

Alan Joseph Bouffard, of Pittsburgh, Pa., B. S. University of Pittsburgh, 1965.

Nancy Jane Carter Fitzgibbon, of New York, N. Y., A. B. Brandeis University, 1970.

Margaret Elizabeth Huber-Haynes, of Oak Ridge, Tenn., A. B., Mount Holyoke, 1969.

Jeanne Ann Borenstein Hyatt, of Baltimore, Md.

Mary Margaret Hamill Lynch, of Quincy, Mass., A. B. Trinity College, 1968.

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MASTERS OF ARTS

in the Faculty of Arts and Sciences

Adeniran Adeboye, of Gbongan, Nigeria, B. Sc. University of Ibadan, 1967. Mathematics.

Joseph Eugene Ahnell, of Pittsburgh, Pa., B. A. (Chemistry) The University of South Florida, 1964; B. A. (Physics), 1965. Chemistry.

Peter Clyde Allen, of Klamath Falls, Oreg., B. A. University of Maryland, 1970. Humanities.

Marc Arlen Anderson, of Brodhead, Wis., B. S. Wisconsin State University, 1967. Chemistry.

Andrea Rebecca Andrews, of Bellefonte, Pa., A. B. Duke University, 1969. History.

Miriam Elaine Drayer Antich, of Salem, Mass. Physics. The Diffraction Regeneration of K_s Mesons.

Catherine Micheline Archer, of Baltimore, Md. Romance Languages.

Dennis Lee Armstrong, of Long Beach, Calif., A. B. Occidental College, 1969. English.

Stephen Lloyd Arnold, of Berkeley Heights, N. J., B. A. The Johns Hopkins University, 1971. Geography & Environmental Engineering.

Modern Pollen in the Waters of the Chesapeake Bay: A Preliminary Inquiry.

Roger Stephen Meyers Baber, of Swindon, Wilts, England, B. A. The University of Liverpool, 1966; B. of Philosophy, 1968. Philosophy.

Richard Bruce Beckner, of Arlington, Va., A. B. Princeton University, 1971. Writing Seminars.

Souvenirs.

Bruce Connard Bell, of Glassboro, N. J., B. S. Carnegie Institute of Technology, 1966. Chemistry.

Thomas Hooker Bell, Jr., of Chelsea, Mass., B. S. University of Maryland, 1969. Earth & Planetary Sciences.

Paula Kaye Benkart, of Youngstown, Ohio, B. A. The Ohio State University, 1969. History.

James Gordon Bennett, of Natick, Mass., B. A. The Johns Hopkins University, 1969. Writing Seminars.

The Girl Who Had Intuition.

William Lawrence Benzon, of Baltimore, Md., B. A. The Johns Hopkins University, 1969. Humanities.

Emilie Louise Bergmann, of St. Louis, Mo. Romance Languages.

Lenard Russell Berlanstein, of Hillside, N. J., A. B. The University of Michigan, 1969. History.

Jeffrey Marc Berry, of Fresno, Calif., A. B. University of California, Berkeley, 1970. Political Science.

Toward a New Theory of How Interest Groups Develop: *Pressure Group Literature and the Case of Cesar Chavez's UFWOC.*

Ronald Norman Berzofsky, of Baltimore, Md., B. S. University of Maryland, 1970. Biology.

Inge Bretherton, of Baltimore, Md., B. A. The Johns Hopkins University, 1971. Psychology.

Jesse Arthur Bromberg, of Queens, N. Y., B. A. State University of New York at Stony Brook, 1971. Writing Seminars.

Jingerton's Body.

Billy Joe Brown, of Jefferson, N. C., B. A. University of Maryland, 1967. Education.

Robert John Brugger, of New Haven, Conn., B. A. University of Notre Dame, 1965; M. A. University of Maryland, 1967. History.

Daniel Joseph Brunelle, of Woonsocket, R. I., B. S. Emory University, 1970. Chemistry.

Margaret Neuburg Bucky, of Mt. Kisco, N. Y., B. A. American University, 1971. Writing Seminars.

Baby It Ain't No Picture Postcard.

Patrick Henry Butler III, of Alexandria, Va., B. A. The College of William and Mary in Virginia, 1967; M. A. University of Delaware, 1969. History.

Mark Lawrence Buzel, of New Hyde Park, N. Y., B. A. State University College, Cortland, N. Y., 1970. Earth and Planetary Sciences.

John Rufus Caleb, of Coatesville, Pa., B. A. Dickinson College, 1971. Writing Seminars.

Point of Order.

Alfonso Caramazza, of Aragona, Italy, B. A. McGill University, 1970. Psychology.

Alasdair John Gibson-Craig-Carmichael. Chemistry.

Suzanne Gearhart Carroll, of Ann Arbor, Mich., A. B. Cornell University, 1968. Romance Languages.

Jack Richard Censer, of Memphis, Tenn., A. B. Duke University, 1968. History.

Jennifer Mary Fauntleroy Chambers, of Washington, D. C. Biology.

Jo Champlin, of Albion, Maine, A. B. Vassar College, 1970. Humanities.

Yeng-Fong Rosalia Chang, of Shansi Province, China. Statistics.

Tsing-Chang Chen, of Taiwan, Republic of China, B. Sc. National Taiwan Normal University, 1965; M. S. National Central University, China, 1968. Earth and Planetary Sciences.

Michael Edward Cherry, of Ottawa, Ontario, Canada, B. S. University of New Brunswick, 1967. Earth and Planetary Sciences.

Paul H. Chutkow, of Chicago, Ill., B. A. The Johns Hopkins University, 1969. Writing Seminars.
The Night Beat.

Carol Barbara Levin Cooper, of Greenport, N. Y., A. B. Cornell University, 1967. Romance Languages.

Joseph Peter Cosgrove, of Orange, N. J., B. F. A. Maryland Institute, College of Art, 1968. Writing Seminars.
The Contents of an Empty Page.

W. Douglas Costain, of New Westminster, British Columbia, Canada, B. A. University of British Columbia, 1969. Political Science.
Issues, Partisan Identification, and Socio-economic Characteristics in Presidential Voting, 1964-1968.

Linda Jane Coverdale, of Brookville, N. Y., B. A. Pembroke College, 1968. Romance Languages.

William Glen Cumberland, of Montreal, Quebec, Canada, B. S. McGill University, 1968. Statistics.

David Cwi, of Chicago, Ill., B. A. Cornell College, Iowa, 1967. Philosophy.

Joe Harris Davis, of Chesterfield, Tenn., B. A. Vanderbilt University, 1961; M. D., 1965; M. P. H. The Johns Hopkins University, 1969. Political Economy.
Cost-Benefit Analysis of Health Sector Programs: *Conceptual Problems Involved in Application.*

Fred Charles DeRafols, of Davis, Calif., B. A. University of California, Davis, 1971. Writing Seminars.
The Pillow Case: a portion of a novel and *Stray Poems Caught.*

Brett Irving Dunlap, of Oakland, Calif., B. A. The University of Iowa, 1969. Physics.

Judith Ann Eames, of Pontiac, Mich., B. S. University of Michigan, 1970. Chemistry.

Julia Evelyn Armstrong Fata, of Chicago, Ill., B. A. Saint Mary's College, 1961. Romance Languages.

Alex Jay Feingold, of Baltimore, Md., B. A. The Johns Hopkins University, 1971. Mathematics.

Stephen Lew Feldman, of Newark, N. J., A. B. Rutgers University, 1968. Geography & Environmental Engineering.
Spatial and Socio-Economic Aspects of Solid Wastes Collection Services: *A Case Study of the City of Baltimore.*

Edward Herbert Friedman, of Richmond, Va., B. A. University of Virginia, 1970. Romance Languages.

John Joseph Gallagher, of Baltimore, Md., A. B. St. Mary's Seminary and University, 1951. Writing Seminars.
Something Can Be Said.

Robert Martin Garfinkle, of Baltimore, Md., B. A. Yale University, 1968. Writing Seminars.
Attempted Robbery.

David Barry Gaspar, of St. Lucia, West Indies, A. A. College of the Virgin Islands, 1966. History.

Joel Glenn Gibson, of Livermore, Calif., A. B. University of California, Berkeley, 1965. Physics.

Ruth Williamson Godfrey, of Tallahassee, Fla., B. A. Florida State University, 1970. Classics.

Richard Martin Golden, of New York, N. Y., B. A. Vanderbilt University, 1969. History.

Ronald Neil Goldman, of Brooklyn, N. Y., B. S. Massachusetts Institute of Technology, 1968. Mathematics.

Ellen Susan Greenebaum Granovetter, of New York, N. Y. Social Relations.

Keith Edward Grau, of Baltimore, Md. Chemistry.

James Ray Green, Jr., of Durham, N. C., B. A. North Carolina University, 1970. Romance Languages.

Carolyn Ann Grega, of Seattle, Wash., B. A. University of Maryland, 1969. Writing Seminars.
To Walk Through the Waters of the Nile.

Esther Paula Blank Greif, of Baltimore, Md., A. B. Syracuse University, 1970. Psychology.

George Mark Gurria, of Brooklyn, N. Y., B. S. Manhattan College, 1970. Chemistry.

Reginetta Haboucha, of Baltimore, Md., B. A. Queens College, 1968. Romance Languages.

Bruce Wayne Hamill, of Baltimore, Md., B. A. Tufts University, 1964. Psychology.

Roger Charles Hansen, of Chicago, Ill., A. B. Olivet Nazarene College, 1969. Education.

Quakerism and the Liberal Arts College: *Swarthmore College in the Twentieth Century.*

Geeta Devi Heble, of Poona, India, B. A. University of Bombay, 1969. German.

Margaret Wadsworth Henderson, of Watsonville, Calif., A. B. Goucher College, 1971. Writing Seminars.

Preparation for a Journey.

James Charles King Henley, of Meridian, Miss., B. A. University of Mississippi, 1959; M. A., 1969. Writing Seminars.

The Stalking Horse and Other Stories.

Gilbert Scott Heron, of Chicago, Ill. Writing Seminars.

Circle of Stone.

Anthony Walter Hozeny, of Madison, Wis., B. A. University of Wisconsin, 1969. Writing Seminars.

Driving Wheel.

Joan Broughton Hulse, of McLean, Va., A. B. Gettysburg College, 1971. Political Science.

Suburban Voting Behavior.

Richard Smyth Ide, of Rochester, N. Y., A. B. Middlebury College, 1965. English.

Joel Stewart Ish, of Salinas, Calif., B. A. The Johns Hopkins University, 1969. Political Science.

California Politics: *Population Dynamics and Recent Political Trends.*

Michael Martin Janson, of New York, N. Y., B. S. Fairfield University, 1969. Physics.

Luis A. Jimenez, of Jamaica, N. Y., A. B. High Point College, 1967; M. A. The University of North Carolina, 1969. Romance Languages.

Craig Thurlow Johnson, of New Berlin, Wis., B. A. University of Wisconsin, 1970. Psychology.

Bruce Martyn Juba, of Plymouth, Pa., B. A. Kings College, 1968. Political Economy.

Rodger Lee Kamenetz, of Baltimore, Md., B. A. Yale University, 1970. Writing Seminars.

Christopher Magisto.

Peter George Kelk, of Toronto, Canada, B. A. University of Toronto, 1969. Political Economy.

Paul Michael Kellman, of Pittsburgh, Pa., B. A. Dartmouth College, 1969. History.

The Taylor System of Scientific Management.

Richard John Kent, Jr., of Los Angeles, Calif., B. A. Loyola University of Los Angeles, 1969. History.

Michael Gray Ketcham, of Reading, Pa., B. A. University of Washington, 1969. English.

Mary Louise Kinzie, of Montgomery, Ala., B. A. Northwestern University, 1967; M. A. The Johns Hopkins University, 1970. English.

Karen Louise Koepp, of Gaylord, Minn., B. A. Gustavus Adolphus College, 1970. German.

Diane Kay Koester, of Marshall, Mo., B. A. Valparaiso University, 1970. German.

Gerda Steinhauer Koetter, of Baltimore, Md., German.

Francis Rudy Kowsky, of Washington, D. C., A. B. George Washington University, 1964. History of Art.

Fredrick Scott Kraly, of Whiting, Ind., B. A. University of Notre Dame, 1970. Psychology.

Elliott Nason Kramsky, of Sacramento, Calif., B. S. University of California, Los Angeles, 1967; M. S. E., 1969. Political Economy.

Externalities and Their Remedies.

Paul G. Kreiner, of Baltimore, Md. Writing Seminars.

Thirty Poems.

Sherban I. Lazar, of Bucharest, Rumania, Diploma in Physics University of Bucharest, 1967. Physics.

Carol Sana Lee, of Lincoln, Mass. Chemistry.

Suh-Jen Lee, of Tainan, Taiwan, B. S. Taiwan Cheng Kung University, 1969. Chemistry.

Wayne Edward Lenik, of New Britain, Conn., B. A. Trinity College, Connecticut, 1969. Romance Languages.

Diane Rachel Loiselle Levin, of La Mirada, Calif., B. A. University of California, Riverside, 1970. English.

Robert Michael Lewis, of Milford Haven, Pembs, England, B. A. University of Oxford, 1968. History.

Edward William Leyhe, of Baltimore, Md., B. A. The Johns Hopkins University, 1953. Education.

Daniel Curtis Littlefield, of Sacramento, Calif. History.

David Lyman Longfellow, of Washington, D. C., B. A. University of Virginia, 1970. History.

Paul Albert Lucas, of Grand Rapids, Mich., A. B. Hope College, 1963; M. S. University of Illinois, 1965. Physics.

Roberta Anne Lucas, of Huntington, W. Va., A. B. West Virginia University, 1970. Classics.

Robert Lancaster Lucke, of Norfolk, Va., B. A. The Johns Hopkins University. Physics.

Lawrence Wayne Markert, of Baltimore, Md. Writing Seminars.
Sleeves and the Shape of Hands.

Kenny Ralph Marotta, of St. Louis, Mo., A. B. Harvard College, 1970. English.

Joseph Lee Maslan, of Toledo, Ohio, B. A. The Johns Hopkins University, 1964. History of Art.

Stephen Hayward Matanle, of Elmira, N. Y., B. A. The Johns Hopkins University, 1971. Writing Seminars.
Executive Calisthenics.

Duane W. McGinnis, of Seattle, Wash., B. A. University of Washington, 1970. Writing Seminars.
The Open Window.

Deborah Marrow McGuire, of Philadelphia, Pa., B. A. University of Pennsylvania, 1970. History of Art.

Liselotte C. Mertsch, of Berlin, Germany, B. A. Towson State College (Md.), 1970. German.

Margaret Ellen Meyer, of Buffalo, N. Y., A. B. Cornell University, 1967. Humanities.

Michael Jay Minot, of Harrison, N. Y. Chemistry.

Shirley Spratt Mitchell, of Nuernberg, Germany, A. B. Vassar College, 1964. History of Art.

Gwenda Morgan, of Bridgend, South Wales, B. A. Southampton University, Southampton, England, 1964; M. A. The College of William and Mary in Virginia, 1968. History.

William Charles Murphy, of Shamokin, Pa., B. S. Villanova University, 1970. Chemistry.

Deborah Rose Nason, of New York, N. Y., B. A. University of Chicago, 1970. Writing Seminars.
Dream of a Devil.

Paul Henry Naylor, of Ridgely, Md., B. S. Washington College, 1970. Chemistry.

Tsun-Shi Nancy Hsieh Nee, of Taiwan, Republic of China, B. S. National Tsing Hua University, Taiwan, China, 1970. Chemistry.

Judith Hathaway Oliver, of Camden, Maine, A. B. Mount Holyoke College, 1969. History of Art.

William Bernard O'Neal III, of Cincinnati, Ohio, B. A. Washington and Lee University, 1967. Writing Seminars.
Whiteguard.

Erika Orfield, of Baltimore, Md., B. A. Towson State College (Md.), 1969. Mathematics.

Mary Joan Orzolek, of Baltimore, Md., B. A. University of Maryland, 1971. Writing Seminars.
Confederate Angels.

Thomas Robert Pentz, of Baltimore, Md., B. A. Oakland University, 1970. Psychology.

Gail Peterson, of Los Alamitos, Calif., A. B. University of Redlands, 1969. German.

Mauricio Barata de Paula Pinto, of Sao Paulo, Brazil, B. E. S. University of Minas Gerais, 1968. Political Economy.

Roger Luc Poirier, of Paris, France, Baccalaureat University of Paris, 1957; M. A. Western Reserve University, 1968. Romance Languages.

Janet Carolyn Pollock, of Minneapolis, Minn., B. A. Lawrence University, 1970. German.

Terry Eugene Porter, of Jacksonville, Fla., B. S. Florida State University, 1964. Writing Seminars.
The Assassination of Huey Long.

Ronald Edward Pyle, of Dallas, Texas, B. S. University of Texas at Arlington, 1969. Chemistry.

Arden Reed, of Denver, Colo., A. B. Wesleyan University, 1970. Humanities.

Margaret Ellen Rice, of Denver, Colo. Writing Seminars.
Was There Ever a Harry Potts.

William Calvin Rice, of Walkersville, Md., B. A. Towson State College (Md.), 1968. History.

Earl Joseph Richard, of Laurel, Md., B. A. Catholic University of America, 1963; B. Th. University of Ottawa, 1965; M. A., 1965; M. Th., 1967. Near Eastern Studies.

David Earl Rigsbee, of Durham, N. C., B. A. University of North Carolina, 1971. Writing Seminars.
Poems and Translations.

Ellen Gordon Robertson, of Glen Ridge, N. J., B. A. University of Rochester, 1969. Humanities Center.

Osborne Robinson, Jr., of Baltimore, Md. Writing Seminars.
Dimensional Portrait.

David Lee Robnett, of Spokane, Wash., B. A. University of Washington, 1965. English.

Kraft H. W. Rompf, of Hamburg, Germany. Writing Seminars.
In the Seeing House.

Sandra Jean Dillard Rosenberg, of High Point, N. C., B. S. Duke University, 1969. Physics.

Kirby Baldwin Scarborough, of New York, N. Y., A. B. Stanford University, 1968. Writing Seminars.
Seis.

Diane Constance Waesche Scharper, of Baltimore, Md., A. B. College of Notre Dame of Maryland, 1964. Writing Seminars.
Pippin: *A Collection of Poems.*

P. G. Scheible, of Scotia, N. Y., B. S. The University of Rochester, 1968. Earth & Planetary Sciences.

Paul Richard Schulman, of Chicago, Ill., B. A. Tulane University, 1969. Political Science.
Bureaucratic Policy and Organizational Scale.

Leonard Gene Schulze, of Schulenburg, Texas, B. A. University of Texas, 1969. Comparative Literature.

Larry Edwin Schutz, of Manhattan Beach, Calif., B. A. University of California, Los Angeles, 1970. Psychology.

Robert James Semper, of Green Bay, Wis., B. S. Moravian College, 1968. Physics.

James John Sherry, of Newark, N. J., B. A. University of California, Riverside, 1969. English.

Jay Edward Simkin, of Baltimore, Md. Political Science.
Persia and the Crisis of Imperial Security.

Lowery Stokes Sims, of Flushing, N. Y., B. A. Queens College, 1970. History of Art.

Ana Maria Snell, of Santander, Spain, Certificate University of Madrid, Spain, 1955. Romance Languages.

Mark Howard Snyder, of Brooklyn, N. Y., A. B. Syracuse University, 1971. Writing Seminars.
Malachi Berkeyev.

Mark William Springgate, of Champlaign, Ill. Chemistry.

Kenneth Alfred Steadman, of Hawthorne, Ill., B. A. University of Dayton, 1963; M. L. A. The Johns Hopkins University, 1971. History.

Mark Wayne Steinhoff, of Brooklyn, N. Y., A. B. Collumbia University, 1967. History.

William Edward Stevenson III, of Baltimore, Md., B. A. The Johns Hopkins University, 1970. Classics.

Frank Charles Strasburger, of Baltimore, Md., A. B. Princeton University, 1967. Education.

Robert Louis Sufit, of Arlington, Va. Chemistry.

Peter Zoltan Takacs, of New Brunswick, N. J., A. B. Rutgers University, 1969. Physics.

Thomas Nelson Thompson, of Jeffersonville, Ind., B. A. Wabash College, 1970. International Studies.
The Myth of the China Market.

Arthur Jay Tobias, of New York, N. Y. Writing Seminars.
Gambrills.

Johannes Maarten Ultee, of Utrecht, Netherlands, B. A. Reed College, 1969. History.

Kathleen Rose Valentine, of Newburgh, N. Y., B. A. C. W. Post College of Long Island University, 1969. Political Science.
The Marxist-Leninist Party: *Problems of the Cuban Case.*

Daun Roell Van Ee, of Seattle, Wash., B. A. University of South Carolina, 1967. History.

John Edward Vernaglia, of North Providence, R. I., B. S. Brown University, 1967. Mathematics.

Eugenio Emilio Vogel, of Temuco, Chile, Licenciado in Physics University of Concepcion, Chile, 1969. Physics.

Sally Noetzel Wall, of Baltimore, Md., A. B. Goucher College, 1967. Psychology.

Lawrence C. Washington, of North Dartmouth, Mass., B. A. The Johns Hopkins University, 1971. Mathematics.

Ellis Archer Wasson, of Rosemont, Pa. History.
D. C. Moore and Reform, The Political Premises of the Reform Cabinet of 1832.

Richard Waterhouse, of Sydney, New South Wales, Australia, B. A. The University of Sydney, 1968. History.

Gerald Dermot Weeks, of Baltimore, Md., B. S. Rensselaer Polytechnic Institute, 1965. Psychology.

Nancy Lynn Weigel, of Baltimore, Md., A. B. Cornell University, 1968. Biology.

Heinz Weiser, of Vienna, Austria, Equivalency of U. S. Baccalaureate Degree Technische Hochschule, Vienna, Austria, 1966. Physics.

Vicki Lee Wheeler, of Louisville, Ky., A. B. Oberlin College, 1971. Chemistry.

Philip Michael Whipple, of Portsmouth, Ohio, B. A. Arizona State University, 1969. Romance Languages.

Stark Canning Whiteley, of Woods Hole, Mass., A. B. Columbia University, 1969. History.

Samuel Alexander Zervitz, of Baltimore, Md. Writing Seminars.
Ravin's God.

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DOCTORS OF PHILOSOPHY

in the Faculty of Arts and Sciences

William Randall Albury, of Baltimore, Md., B. A. The Johns Hopkins University, 1968. History of Science.

The Logic of Condillac and the Structure of French Chemical and Biological Theory, 1780-1801.

Paul Lawrence Anderson, of Kirkwood, Mo., B. A. Elmhurst College, 1966. Biology.

Structural and Functional Characterization of Chick Embryo Chromatins.

Robert Edward Anderson, of Urbana, Ill., B. S. Stanford University, 1966. Political Economy.

The Individual's Transactions Demand for Money: *A Utility Maximization Approach.*

Andrew Chase Backus, of Silver Spring, Md., B. A. The Johns Hopkins University, 1966. Chemistry.

The Solvolysis of Benzhydryl-type Lactones.

Jean Hogarth Harvey Baker, of Baltimore, Md., B. A. Goucher College, 1961; M. A. The Johns Hopkins University, 1965. History.

Politics of Continuity: *Maryland Political Parties, 1861-1868.*

Richard Henry Barchi, of Yardley, Pa., B. S. United States Naval Academy, 1966. Operations Research and Industrial Engineering.

An Integer Programming Approach to Capacity Expansion and Production Planning.

Bernard Frank Batto, of Bandera, Texas, A. B. Maryknoll Seminary, Illinois, 1963. Near Eastern Studies.

Studies on Women at Mari: Politics and Religion.

George William Benedict, of Columbus, Ohio, B. A. Williams College, 1959; M. D. Vanderbilt University, 1963. Biology.

The Partial Purification and Characterization of a DNA Polymerase from Baker's Yeast.

Sue Ellen Berryman Bobrow, of Pasadena, Calif., B. A. Pomona College, 1959. Social Relations.

A Balance Theory of Distributive Justice and Experimental Tests of Derived Consequences.

William James Boettinger, of Baltimore, Md., B. E. S. The Johns Hopkins University, 1968. Mechanics.

Surface Relief Cinemicrography of the Unsteady Solidification of the Lead-Tin-Cadmium Ternary Eutectic.

John Lawson Bordley, Jr., of Sewanee, Tenn., B. S. Davidson College, 1965. Chemistry.

Carbon-14 Tracer Studies of the Secondary Reactions in the Cracking of Hexadecane Over Zeolite Catalysts.

Eliyahu Borukhov, of Jerusalem, Israel, B. A. Hebrew University, Jerusalem, 1961; M. A. The Johns Hopkins University, 1971. Political Economy.

City Size, Land Use, and Transportation Costs.

Wesley Lamont Bradford, of Pentress, W. Va., B. S. West Virginia University, 1966; M. S. Oregon State University, 1968. Earth and Planetary Sciences.

A Study on the Chemical Behavior of Zinc in Chesapeake Bay Water using Anodic Stripping Voltametry.

Derek Kingsley Brady, of Auckland, New Zealand, B. E. Auckland University College School of Engineering, 1956; M. S. E. The Johns Hopkins University, 1961. Geography and Environmental Engineering.

Development of a General Computer Model for Simulating Discharges in Three Dimensions.

Bernard Gerard Bricks, of Pittsburgh, Pa., B. S. Memphis State University (Tenn.), 1963; M. A. The Johns Hopkins University, 1969. Physics.

Excitation and Heating Processes in a Pulsed Argon-Ion Laser.

Arthur Stanwood Brooks, of St. Johnsbury, Vt., B. A. Washington and Jefferson College, 1965; M. S. University of Vermont, 1967. Geography and Environmental Engineering.

The Influence of a Thermal Effluent on the Phytoplankton Ecology of the Indian River Estuary, Delaware.

David Reed Burt, of Millburn, N. J., B. A. Amherst College, 1965. Biophysics.

Subcellular Distribution of Labeling of Phospholipids and Acetylcholine in Rat Sympathetic Ganglia at Rest and in Activity.

Dennis Robert Capozza, of Providence, R. I. Political Economy.

Transportation and the Urban Economy.

Charles Henry Carman, of New Brunswick, N. J., A. B. Rutgers University, 1965. History of Art.

Cigoli Studies.

Charles Henry Carter, of Lake Oswego, Oreg., B. S. Portland State College (Oreg.), 1964. Earth and Planetary Sciences.

Miocene-Pliocene Beach and Tidal Flat Sedimentation, Southern New Jersey.

William Francis Cipolla, of Clifton Heights, Pa., A. B. University of Pennsylvania, 1966; M. A. The Johns Hopkins University, 1968. Romance Languages.

Elements of Organization in Les Chants de Maldoror.

Michael Paul Claudon, of Antioch, Calif., A. B. University of California, Berkeley, 1966. Political Economy.

International Trade and Technology: *Models of Dynamic Comparative Advantage.*

Arthur Cohen, of Morristown, N. J., B. S. Newark College of Engineering, 1956; M. S. E. Syracuse University, 1958. Electrical Engineering.

Analysis and Synthesis of Bit Synchronizer Loops Controlled by Zero Crossing Epochs.

Martin Lewis Cohen, of Baltimore, Md., B. E. S. The Johns Hopkins University, 1963. Electrical Engineering.

Robust Procedures and Autoregressive Models in Communication Theory.

Edward Marks Cook, Jr., of Chicago, Ill., A. B. Harvard College, 1965. History.

The Fathers of the Towns: *Leadership and Community Structure in Eighteenth Century New England.*

William John Cowart III, of Radnor, Pa., B. A. Virginia Military Institute, 1967. History of Art.

Ecoliers to Fauves, Matisse, Marquet and Manguin Drawings: 1890-1906.

Robert Milton Davies, of Wichita, Kans., B. A. University of Kansas, 1965; M. S. Wichita State University (Kans.), 1968. Geography and Environmental Engineering.

The Entrainment of Zooplankton into the Cooling Water Systems of Three Steam Generating Stations.

James McMurrin Dean, of Berkeley, Calif., B. A. University of California, Riverside, 1966. English.

The World Grown Old: *The Decay of the World in the Later Middle Ages.*

Vincent Joseph Dell'Orto, of New York, N. Y., A. B. Saint Peter's College, 1966; M. A. The Johns Hopkins University, 1967. German.

The Histories, Travels and Essays of Carl Julius Weber.

Ellen Barbara Dickstein, of Bellerose, N. Y., B. A. Queens College, 1968; M. A. The Johns Hopkins University, 1970. Psychology.

The Development of Self-Esteem: *Theory and Measurement.*

William Elder Doll, Jr., of Detroit, Mich., A. B. Cornell University, 1953; M. A. Boston University, 1961. Education.

Analysis of Dewey's Educational Writings Interpreted with Reference to his Concept of Change.

Barbara Ann Dreyer, of Holliston, Mass., B. S. Concordia Teachers College, 1953; M. Ed. The Johns Hopkins University, 1958. Education.

The Influence of the Mental Hygiene Movement of the Education of Children during the Early Decades of the Twentieth Century in America.

Min-Wen Du, of Taiwan, China, B. S. National Taiwan University, 1966. Computer Science.

Multiple Fault Detection in Combinational Circuits.

William Theodore Durr, of Baltimore, Md., B. A. Houghton College, 1954; B. D. Princeton Theological Seminary, 1957. History.

The Conscience of a City: *A History of the Citizens Planning and Housing Association and Efforts to Improve Low Income and Public Housing in Baltimore, 1937-1954.*

Gerd William Ehrlich, of Towson, Md., B. A. College of Idaho, 1948; M. A. State College of Washington, 1950; LL. B. University of Maryland, 1954. Political Science.

Ferdinand Lassalle's Significance for Our Time.

Bettye Kirkpatrick Eidson, of Summerville, Ga., A. B. University of Chattanooga, 1961; M. A. University of Georgia, 1963. Social Relations.

Institutional Racism: *Minority Group Manpower Policies of Major Urban Employers.*

John William Ellwood, of New York, N. Y., B. A. Franklin and Marshall College, 1964; M. A. The Johns Hopkins University, 1966. Political Science.

The Growth and Development of the Wallace Organization of 1968: *A Study of Third Party Formation.*

Catherine Virginia Boyle Ermer, of Baltimore, Md., A. B. Goucher College, 1966; M. A. The Johns Hopkins University, 1968. Political Science.

Administration of Complaint Procedures by Department of Housing and Community Development in City of Baltimore.

Allan Maurice Feldman, of Paterson, N. J., B. S. University of Chicago, 1965; M. A. 1967. Political Economy.

Non-Recontracting, Recontracting and Equitable Trading Processes.

Robert Nicholas Ferguson, of Washington, D. C., B. A. The Catholic University of America, 1966. Chemistry.

Deuterium Isotope Effects in the Barton Reaction.

Joseph James Frank, of Glen Rock, N. J., B. S. University of Notre Dame, 1966. Chemistry.

Stereospecificity in Acid Cleavage of 1-Methoxynortricyclane and 1-Acetoxynortricyclane.

Russell Inslee Fries, of Dallas, Texas, B. A. Yale University, 1963; M. A. The Johns Hopkins University, 1968. History.

A Comparative Study of the British and American Arms Industry, 1790-1890.

Sarel Paulette Fuchs, of Baltimore, Md., A. B. College of Notre Dame of Maryland, 1964; M. A. The Johns Hopkins University, 1965. Education.

The Education of Princes: *A Comparative Analysis of Desiderius Erasmus, Institutio Principis Christiani, Guillaume Budé's De L'Institution du Prince, and Thomas More's Utopia.*

Hajime Fujita, of Tokyo, Japan, B. S. Nihon University, 1965; M. S. E., 1967. Mechanics.

Unsteady Response of an Airfoil to Wake Cutting.

David Holt Galaty, of Oak Park, Ill., B. A. Trinity College, Connecticut, 1964. History of Science.

The Emergence of Biological Reductionism.

Marvin Edward Gettleman, of New York, N. Y., B. A. The City College of New York, 1957; M. A. The Johns Hopkins University, 1959. History.

Reform, Radicalism, and Party Development: *A Study of the Dorr Rebellion and Rhode Island Politics, 1833-1849.*

Robert Arthur Gilmour, of Los Angeles, Calif., B. A. University of California, Davis, 1966; M. A. The Johns Hopkins University, 1969. History.

The Other Emancipation: *Studies in the Society and Economy of Alabama Whites during Recontruction.*

Russell Brian Goodman, of Pyote, Texas, A. B. University of Pennsylvania, 1966; B. A. Oxford University, 1968. Philosophy.

Some Psychological Phenomena and the Nature of Perception.

Joel Francis Gordon, of Harrisburg, Pa., B. S. Carnegie-Mellon University, 1968; M. A. The Johns Hopkins University, 1971. Psychology.

Conservation and the Marked Semantic Distinction: *Indications of a Language-Thought Interaction.*

Willard Lee Graves, Jr., of Springfield, Mo., B. S. Drury College, 1962; B. E. S. The Johns Hopkins University, 1965; M. S. E., 1967. Geography and Environmental Engineering.

Cooling Water Temperature Models.

Jerry William Gustafson, of Rockford, Ill., B. A. Beloit College, 1963. Political Economy.

An Essay on the Concept of Collective Rationality.

Gerald Jay Handschuh, of New York, N. Y., B. S. The City College of New York, 1966. Chemistry.

Spectral Investigation of Iron (I) Etioporphyrin II and Related Systems.

Ferenc Imre Harosi, of Budapest, Hungary, M. E. The Cooper Union, 1967. Biomedical Engineering.

Frog Rhodopsin in situ: *Orientational and Spectral Changes in the Chromophores of Isolated Retinal Rod Cells.*

Stanley Cooper Harrison, of Hardin, Mont., B. A. Montana State University, 1956; M. S. Texas Technological College, 1966. Earth & Planetary Sciences.

The Sediments and Sedimentary Processes of the Holocene Tidal Flat Complex, Delmarva Peninsula, Virginia.

Donald William Hearn, of Laurinburg, N. C., B. A. University of North Carolina, 1961; M. S. The Johns Hopkins University, 1968. Operations Research & Industrial Engineering. Minimum Covering Spheres.

John William Henderson, of Binghamton, N. Y., B. A. College of The Holy Cross, 1966. Chemistry.

Stereoisomerism of Triarylmethyl Carbanions.

George Robert Himmer, Jr., of Baltimore, Md., B. A. The Johns Hopkins University, 1963; M. A., 1968. History.

Soviet Russia's Economic Relations with Germany, 1918-1922.

Larry Joe Hitterdale, of Santa Ana, Calif., B. A. Pacific Lutheran University, 1964. Philosophy.

Verbal Propositions in J. S. Mill's Logic.

Howard Steven Hock, of Brooklyn, N. Y., B. S. Polytechnic Institute of Brooklyn, 1962; M. A. The Johns Hopkins University, 1969. Psychology.

The Role of Structure in the Perception of Familiar and Unfamiliar Stimuli.

Ann Lorraine Hollick, of Berkeley, Calif., B. A. The University of California, Berkeley, 1963; M. A. The Johns Hopkins University School of Advanced International Studies, 1966. International Studies.

United States Ocean Policy: 1948-1971.

James Leonard Hudson, of Baltimore, Md., B. A. The Johns Hopkins University, 1966. Philosophy.

Logic, Language, and Intensional Objects.

Judith Andrea Jacobson, of Baltimore, Md., B. A. St. John's College, 1965; M. A. The Johns Hopkins University, 1969. Psychology.

Self-perception and Perception of Others.

Bruce Lewis Jaffee, of Worcester, Mass., B. A. Brown University, 1967; M. A. The Johns Hopkins University, 1970. Political Economy.

Aspects of the Regulated Public Utility: *Misallocation, Marginal Cost Pricing, and Depreciation.*

Lawrence Joseph Johnson, of Mauston, Wis., B. A. University of Wisconsin, 1967; M. A. The Johns Hopkins University, 1970. English.

The Avellana or Conflictus Virtutum et Viciorum by Wilhelm Jordaens (d. 1372).

John Bryant Kervin, of Kimberley, British Columbia, B. A. University of British Columbia, 1967. Social Relations.

An Information-Combining Model for the Formation of Performance Expectations in Small Groups.

Akhtar Salamat Khan, of Aligarh, U. P., India. Mechanics.

Tensile Waves of Finite Amplitude in a Cystalline Solid.

Anne Veronica Tennant Whyte Kirkby, of Thorne Yorkshire, England, B. A. Cambridge University, 1963. Geography and Environmental Engineering.

The Use of Land and Water Resources in the Past and Present Valley of the Oaxaca, Mexico.

Victoria Eulalia Kirkham, of Jersey City, N. J., B. A. Wellesley College, 1964; A. M. University of Illinois, 1967; M. A. The Johns Hopkins University, 1969. Romance Languages.

The Filocolo of Giovanni Boccaccio.

Juan Igal Korenbrot, of Mexico City, Mexico, M. A. The Johns Hopkins University, 1970. Biophysics.

Dark Ionic Current and the Effect of Light in Isolated Rod Outer Segments as Determined by Their Osmotic Behavior.

Vlasta Bonacic Koutecky, of Split, Yugoslavia, Diploma Zagreb University, 1967. Chemistry.

Some Consequences of the Nonlinearity of the Hartree-Fock Approach.

Francis Rudy Kowsky, of Washington, D. C., A. B. George Washington University, 1964; M. A. The Johns Hopkins University, 1971. History of Art.

Frederick Clarke Withers, 1828-1901.

Henry Morris Krisch, of Philadelphia, Pa., A. B. University of Pennsylvania, 1967; M. A. The Johns Hopkins University, 1968. Biophysics.

Replication and Recombination in Ligase-deficient rII Bacteriophage T4D, and Polynucleotide Ligase in Bacteriophage T4D Recombination.

Wen-hsiung Kuo, of Formosa, B. A. Tunghai University, 1962; M. A. State University of New York, Buffalo, 1968. Social Relations.

The Political Behavior of Big City Mayors.

Patrick Edward Laredo, of Paris, France, Dipl. in Civil Engr. University of Nancy, 1969; M. S. E. The Johns Hopkins University, 1971. Computer Science.

A Methodology for Comparison of Computer Aided Diagnosis Programs.

John Norman Lee, of Schenectady, N. Y., B. S. Union College, 1966; M. A. The Johns Hopkins University, 1969. Physics.

Magnetic Interactions and Magneto-Crystalline Effects in $TbPO_4$ and $TmAsO_4$.

Steven Eric Levitsky, of Montreal, Canada, B. A. Acadia University, 1968; M. A. The Johns Hopkins University, 1970. English.

The Discovery of Sir Gawain and the Green Knight.

* Ellen Ann Lindemann, of Chicago, Ill., B. A. Saint Xavier College, 1964. Chemistry.

Mark Willard Lipsey, of Memphis, Tenn., B. S. Georgia Institute of Technology, 1968. Psychology.

Scientific Values and Scientific Knowledge: *A Test of an Evolutionary Model.*

Lewis I-shih Liu, of Taipei, Taiwan, China, B. S. National Taiwan University, 1964. Mechanics.

On Irreversible Thermodynamics.

Lokia Liu, of An-hwei, China, B. S. National Taiwan University, 1966; M. S. National Tsing Hua University, 1968. Electrical Engineering.

Some Aspects of Phase Transitions and Critical Phenomena in Magnetic Systems.

David Marvin Lorton, of Philmont, N. Y., B. A. Harpur College, 1966. Near Eastern Studies.

The Juridical Terminology of International Relations in Egyptian Texts Through Dynasty XVIII.

Alexander Henderson Lumpkin, of Rock Hill, S. C., B. A. The University of the South, 1965; M. A. The Johns Hopkins University, 1969. Physics.

Development of a Two-Section Ge(Li) Compton Polarimeter with Applications in the 2s-1d Shell.

* Posthumously.

Hugh McKenna Lynch, of Montreal, Canada, B. A. Dartmouth College, 1950; B. S. Carnegie Institute of Technology, 1952; M. S., 1953. Electrical Engineering.

System Identification Using Lyapunov-Designed Model Builders.

John Markoff, of New York, N. Y., A. B. Columbia University, 1962. Social Relations.

Who Wants Bureaucracy?

Dermot Flannan McAleese, of Dublin, Ireland, B. of Commerce National University of Ireland, 1962; M. of Economic Science, 1964; M. A. The Johns Hopkins University, 1969. Political Economy.

Import Demand, Protection and the Effects of Trade Liberalization on the Irish Economy.

Paul David McElroy, of Youngstown, Ohio, A. B. Allegheny College, 1958; M. A. T. The Johns Hopkins University, 1959. Education.

The Effective and Ineffective Practices of College Supervisors of Student Teachers.

Isabelle Muir McIlwaine, of Staten Island, N. Y., A. B. Hunter College, 1963. Biology.

Multiple Hemoglobins of the Embryonic and Adult Rabbit.

Carl Henry McMillan, Jr., of Annapolis, Md., A. B. Yale University, 1952. Political Economy.

Aspects of Soviet Participation in International Trade.

Francis Jules Merceret, Jr., of Baltimore, Md., B. A. The Johns Hopkins University, 1965. Earth and Planetary Sciences.

An Experimental Study of Wind Velocity Profiles over a Plowed Field.

Richard Paul Mied, of Baltimore, Md., B. E. S. The Johns Hopkins University, 1968. Earth and Planetary Sciences.

Wave-Induced Instabilities in Stratified Fluids.

Brian Moores, of Manchester, England, Certificate in Mech. Engr. Royal College of Advanced Technology, Salford, England, 1958. Operations Research & Industrial Engineering.

Re-allocation of Student Nurses to Match Patient Requirements in Different Hospitals.

Donald Edward Morton, of Mexia, Texas, B. A. Rice University, 1961; M. A. The Johns Hopkins University, 1963. English.

Eccentric Sage: *The Development of Form in the Works of George Meredith.*

Gerald Lew Moss, of Aberdeen, Md., B. S. E. University of Michigan, 1956. Mechanics.

Measurement and Analysis of Thermal Inhomogeneities Developed during the Plastic Deformation of Copper.

Markus Frederick Motsch, of Landshut, Germany, B. A. University of Waterloo, Canada, 1963; M. A., 1965. German.

Die Poetische Epistel in der Deutschen Dichtung und Literaturkritik des Achtzehnten Jahrhunderts.

George Lincoln Murphy, of New Wilmington, Pa., B. S. Ohio University, 1963. Physics.

Topics in Relativistic Magnetohydrodynamics.

Masao Nakamura, of Tokyo, Japan, B. S. Keio University, 1967; M. S., 1969. Operations Research and Industrial Engineering.

Mathematical Analysis and Optimization of Health Services Systems.

Bruce John Neilson, of New Alexandria, Pa., A. B. Princeton University, 1964; M. S. E., 1969; M. A., 1969. Geography and Environmental Engineering.

Mechanisms of Oxygen Transport and Transfer by Bubbles.

Ralph Francis Nelson, of Hartford, Conn., B. A. Amherst College, 1967. Biophysics.

The Electrical Properties of Neurons in Necturus Retina.

Marilyn Moser Neville, of Great Bend, Kans., B. A. William Marsh Rice University, 1966. Biology.

A Derepressible Active Transport System for Glucose in Neurospora Crassa.

Garrett Mitchell Odell, of New Canaan, Conn., B. E. S. The Johns Hopkins University, 1965. Mechanics.

A Continuum Theory of Red-Cell "Demixing" in Blood Flow.

Michael David Ornstein, of Montreal, Canada, B. S. McGill University, 1967. Social Relations.

Entry into the American Labor Force.

Mohamed Yousif Osman, of Egypt, B. Elect. Engr., Cairo University, 1966; B. Sc., 1968. Electrical Engineering.

Universal Base Functions and Modules for Realizing Switching Functions and Sequential Machines.

Larry Dean Partain, of McKinney, Texas, B. S. E. E. The University of Tennessee, 1965. Electrical Engineering.

Microwave Transport Properties of n-type Germanium.

Herbert Leon Petri, of Hamilton, Ohio, B. A. Miami University, 1967; M. A. The Johns Hopkins University, 1969. Psychology.

Functions of Cues Associated with Reinforcement and Nonreinforcement.

Howard Neil Plotkin, of Oak Park, Mich., A. B. University of Michigan, 1964. History of Science.

Henry Draper: *A Scientific Biography.*

Gardner Dwinell Pond, Jr., of Boston, Mass., A. B. Boston University, 1961. Political Science.

Political Thought of John Locke.

Robert Emmet Proctor III, of Los Angeles, Calif., B. A. University of San Francisco, 1967; M. A. The Johns Hopkins University, 1970. Romance Languages.

Emanuele Tesauro's Cannocchiale Aristotelico: *A Study of the Lie in the Arts.*

Alex Henry Ray, of New York, N. Y., A. B. Columbia University, 1964. Biology.

The Location of the Antigen Binding Site of Guinea Pig Antibodies by Affinity Labeling.

Ronald Lane Reese, of Cold Spring Harbor, N. Y., A. B. Middlebury College, 1964. Physics.

Light Scattering Study of the Soft Modes of KD_2PO_4.

Yung Whee Rhee, of Pochun-kun, Kyunggi-do, Korea, B. of Economics Seoul National University, 1960; M. A. University of Hawaii, 1965. Political Economy.

Absorptive Capacity and Optimum Growth.

Christopher Symonds Rhines, of Glastonbury, Conn., B. A. Amherst College, 1961; M. A. The Johns Hopkins University, 1966. Political Science.

The Development of the French Executive in The Revolution, 1789-1794.

Carl Douglas Rhodes, Jr., of Spooky Hollow, N. C., B. A. The University of North Carolina, 1963. Biology.

Purification and Properties of Tryptophanyl-tRNA Synthetase from Neurospora Crassa.

Abraham Landis Riley, of Baltimore, Md., B. E. S. The Johns Hopkins University, 1963; M. S. 1968. Electrical Engineering.

Effects of a Band-Tail on the Low Temperature Conduction of Indium Antimonide.

James Joseph Riley, of Kansas City, Mo., A. B. Rockhurst College, 1965. Mechanics.

Computer Simulations of Turbulent Dispersion.

James Allen Rimbach, of Portland, Oreg., B. A. Concordia Senior College, 1961; B. D. Concordia Seminary, 1965; S. T. M., 1966. Near Eastern Studies.

Animal Imagery in the Old Testament: *Some Aspects of Hebrew Poetics.*

Jo Ann Ooiman Robinson, of Denver, Colo., A. B. Knox College, 1964; M. A. The Johns Hopkins University, 1968. History.

The Traveler from Zierkzee: *The Religious, Intellectual and Political Development of A. J. Muste from 1885 to 1940.*

Samuel Ron, of Jerusalem, Israel, B. S. E. E. Technion, Israel Institute of Technology, 1961; M. S. E. E., 1964. Biomedical Engineering.

A Quantitative Study of Eye Movements Evoked by Cerebellar Stimulation in the Alert Monkey.

Gary James Rottman, of Denver, Colo., A. B. Rockhurst College, 1966; M. A. The Johns Hopkins University, 1969. Physics.

The Far Ultraviolet Spectrum of Venus.

Paul Noel Roy, of Ontario, Canada, B. A. McGill University, 1964. Political Economy.

The Effects of Changes in Government Monetary and Fiscal Policies in an Open-Economy One-Sector Monetary Growth Model.

Don John Rutledge, Jr., of Fayetteville, Tenn., A. B. The George Washington University, 1966; M. A. The Johns Hopkins University, 1967. German.

Dialogues of the Dead in 18th Century Germany.

Yassin Sankar, of Guyana, South America, B. A. McGill University, 1966; M. A. University of Toronto, 1968. Education.

The Dynamics of Bureaucratic Change in Education: Towards the Resolution of Conceptual Conflicts.

Barbara Joy Carlson Schmeckpeper, of Madison, S. Dak., B. A. Macalester College, 1966. Biology.

The Use of Formamide in Nucleic Acid Reassociation with Emphasis on Problems Encountered with Eukaryotic Genomes.

Gary Wayne Schnuelle, of Nottingham, England, B. S. California Institute of Technology, 1967. Chemistry.

Theoretical Studies of Molecular Electronic Structure: *Valence Bond Methods Revisited.*

Alan Michael Schultz, of Baltimore, Md., A. B. University of Rochester, 1966. Biology.

The Glycolipids of Normal and Transformed BHK Cells.

Carsten Emil Seecamp, of Boulder, Colo., B. S. Southern Connecticute State College, 1964; M. A. The Johns Hopkins University, 1965. German.

Die Mentor-Zögling-Konfiguration im Deutschen Roman des Achtzehnten Jahrhunderts.

Carole Shammas, of Los Angeles, Calif., B. A. University of Southern California, 1964; M. A., 1967. History.

English Conceptions of Colonization in the Sixteenth and Seventeenth Centuries.

David Joseph Shlien, of Montreal, Canada, B. E. McGill University, 1961. Mechanics.

Dispersion Measurements of a Fluid Sheet in Two Turbulent Flows.

Ellen Kovner Silbergeld, of Washington, D. C., A. B. Vassar College, 1967. Geography and Environmental Engineering.

The Effect of Organo-Chlorine Insecticide Exposure on Adaptation to Thermal Stresses in the Johnny Darter, Etheostoma Nigrum Rafinesque.

Gary Simons, of Deer Park, N. Y., B. S. Clarkson College of Technology, 1967. Chemistry.

On Using Model Potentials to Study the Vibrational and Electronic Properties of Molecules.

Madeleine Anjubault Simons, of Alencon, France, M. A. The Johns Hopkins University, 1969. Romance Languages.

Sympathie des âmes et Volupté d'ange: Recherches et réflexions sur un texte des Confessions.

Sahjendra Narain Singh, of Jat Dumri, Patna, India, B. Sc. Patna University, 1965; M. E. Indian Institute of Science, 1968. Electrical Engineering.

Decoupling in Linear and Nonlinear Systems by State-Variable Feedback.

Mete Bahaeddin Sirvanci, of Aksehir, Turkey, B. S. E. E. Robert College, Istanbul, Turkey, 1967. Electrical Engineering.

A Study of Autoregressive Dependence in Nonparametric Detection.

William Edward Slauson, of Williamsburg, Va., B. S. College of William and Mary, 1966. Electrical Engineering.

Two-Spin Cross-Relaxation between Two Paramagnetic Spin Species.

Ephraim Koch Smith, Jr., of Grosse Point, Mich., A. B. Hillsdale College, 1962; M. A. University of Nebraska, 1964. History.

Robert Lansing and the Paris Peace Conference.

John Abernathy Smith, of Pulaski, Tenn., B. A. Vanderbilt University, 1961; M. A. The Johns Hopkins University, 1967. History.

National Christianity: *The Search for Unity Among American Protestants, 1880-1920.*

John Terry Smith, of Sydney, Nova Scotia, B. Sc. Acadia University Nova Scotia, 1962; B. A. Oxford University, 1965; M. A. University of British Columbia, 1967. Statistics.

Some Statistical Methods for Data Grouped by Quantiles.

Leah Townsend Johnson Smith, of Raleigh, N. C., A. B. Stanford University, 1964. Political Economy.

An Empirical Evaluation of Import Substitution in Five Large Latin American Countries.

Richard Henry Smith, Jr., of Baldwin, Md., B. E. S. The Johns Hopkins University, 1966. Electrical Engineering.

Multiplier Functionals for Programming in Normed Spaces.

Aage Bøttger Sørensen, of Silkeborg, Denmark, M. Sc. University of Copenhagen, 1967. Social Relations.

The Occupational Mobility Process: *An Analysis of Occupational Careers.*

Frank Joseph Sparzo, of Waterbury, Conn., B. A. University of Connecticut, 1957; M. A. Appalachian State Teachers College (N. C.), 1958. Education.

Administrative Experience and Attitudes Toward Education.

Edward Stavnezer, of New Britain, Conn., B. A. University of Connecticut, 1964; M. A., 1967. Biology.

The Evolution and Divergence of Repetitious DNA in the Rodents.

Gordon McNett Stewart, of Charlottesville, Va., B. A. Union College, 1965; M. A. The Johns Hopkins University, 1966. German.

The Literary Contributions of Christoph Daniel Ebeling.

Lawrence Duncan Stokes, of Toronto, Canada, B. A. University of Toronto, 1962; M. A. The Johns Hopkins University, 1964. History.

The Sicherheitsdienst (SD) and the Reichsführer SS and German Public Opinion, September 1939—June 1941.

Harold David Todd, of Mt. Vernon, Ill., B. S. University of Illinois, 1966. Chemistry.

Analytical Evaluation and Computation of Molecular Integrals and Application to the $^3B_1$ State of Methylene.

Subidey Togan, of Istanbul, Turkey, B. S. Middle East Technical University, 1967. Political Economy.

Trade, Growth and International Investment: *A Study in Comparative Dynamics.*

Alice Sook Huang Tu, of Swatow, China. Biology.

Purification and Functional Characterization of a Steroid Receptor from Chick Embryo Liver.

Erik Alfons Oswald Jozef Van Hove, of St. Lambrechts-Woluwe, Lic. in Phil. Philosophical Faculty S. J. Heverlee, Louvain, 1964; Lic. in Sociology Catholic University of Louvain, 1968. Social Relations.

Collective Decision-Making in a Government Health Agency: *The Regional Medical Program.*

Robert Albert Van Order, of Chicago, Ill., A. B. Grinnell College, 1966. Political Economy.

Theoretical Models of Macroeconomic Policy.

Ramakrishna Rao Vemuganti, of Guntur, India, B. A. Andhra University, 1958; B. A. Honours, 1960; M. A., 1961; M. of Statistics The Indian Statistical Institute, 1963. Operations Research & Industrial Engineering.

A Group Theoretic Dynamic Programming Algorithm for Linear Integer Programs.

Daniel Anthony Williams, of Frederick, Md., B. A. University of Maryland, 1964; M. A. The Johns Hopkins University, 1967. Romance Languages.

The Social Poetry of Miguel Hernández.

William Henry Allen Williams II, of Philadelphia, Pa., B. A. Lafayette College, 1959; M. A. The Johns Hopkins University, 1962. History.

H. L. Mencken: *An Intellectual Biography, 1880-1929.*

Richard Lee Wilson, of Worthington, Minn., B. A. The University of Chicago, 1966. International Studies.

Bureaucratic Power in Foreign Policy Decision Making: *The Manhattan District Triumvirate and U. S. Nuclear Monopoly.*

William Stanley Wilson, of Alexander City, Ala., B. S. College of William and Mary, 1959. Earth and Planetary Sciences.

An Experimental Study of the Growth of Mechanically Generated Surface Water Waves when Subjected to a Fully Developed Turbulent Channel Air Flow.

Jay Andrew Winsten, of Westbury, N. Y., A. B. University of Rochester, 1965. Biology.

Studies with Transcription Complexes from Bacillus Subtilis.

John Theodore Wold, of Turlock, Calif., B. A. California Lutheran College, 1965; M. A. The Johns Hopkins University, 1968. Political Science.

Internal Procedures, Role Perceptions and Judicial Behavior: *A Study of Four State Courts of Last Resort.*

James Howard Wyche, of Greenport, N. Y., B. S. Cornell University, 1965. Biology.

Histidyl-tRNA Synthetase Mutants and Regulation of the Histidine Operon in Salmonella Typhimurium.

Lawrence Yelowitz, of Brooklyn, N. Y., B. S. Brooklyn College, 1964; M. A. T. Harvard University, 1965. Computer Science.

A Symmetric, Top-Down Structured Approach to Computer Program/Proof Development.

Phyllis Jane Winston Zuckerman, of Greensboro, N. C., B. A. Wellesley College, 1967; M. A. The Johns Hopkins University, 1971. Romance Languages.

The Status of Fiction in Nerval's Work.

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THE JOHNS HOPKINS UNIVERSITY · BALTIMORE, MARYLAND 21218

OFFICE OF THE REGISTRAR

June 30, 1972

For those who use the Commencement Program as an official record of the awarding of degrees, please note the following changes to the 1972 Commencement Program.

ADDITIONS AND DELETIONS

1. Arts and Sciences Baccalaureate Candidates Graduationg with Departmental Honors

Add: Charles A. Backoff, Earl W. Grogan, Isaiah Kuperstein, Henry N. Robey, John G. Romanski, Robert M. Shapiro, Gary R. Stoneburner

2. Arts and Sciences Baccalaureate Candidates Graduating with General Honors

Add: Andrew Van Tosh

3. Bachelor of Arts Degrees (Arts and Sciences) New Total - 482

Add: Charles Conover Talbot, Jr., Andrew Van Tosh

Delete: Daniel Bellin, Kevin Michael Fitzgerald, Ronald Lewis Gilbride, Thomas Warren Jackson, Elwyn Monroe Jordan, Jeffrey A. Katz, Thomas Allan McVicker, Stephen Alan Ramming, Wayne George Towns, Robert Friste Vogt, Jr., Rita Wondrak, Kamehameha Kai-Min Wong, Jr.

4. Bachelor of Engineering Science Degrees (Arts and Sciences) New Total - 44

Delete: John Edward Duker III, Donald Edwin Gibson

5. Bachelor of Science Degrees (Evening College) New Total - 135

Delete: Kenneth Alan Borig

6. Bachelor of Science in Engineering Degrees (Evening College) New Total - 115

Delete: Leo Adam Kane

7. Master of Science Degrees (Evening College) New Total - 104

Delete: Norig Garo Asbed
Edward Victor Rivard

8. Master of Education Degrees (Evening College) New Total - 136

Add: Katherine DeLon Ruffin, of Baltimore, Md., B.S. Morgan State College, 1963.

9. Master of Public Health Degrees (School of Hygiene and Public Health) New Total - 103

Add: Georgia Lee Brown, of Baltimore, Md., B.S. Tuskeegee University, 1965; M.S. University of Maryland, 1968.
Delete: Devdass Dattatraya Karmarkar
James Michael Lynch

10. Doctor of Public Health Degrees (School of Hygiene and Public Health) New Total - 4

Delete: Syed Aqa Zafir

11. Master of Arts (Arts and Sciences) New Total - 180

Add: Mary Florence Reynolds, of Baltimore, Md., A.B. College of Notre Dame of Maryland, 1946; M.A. The Johns Hopkins University, 1962 (Writing Seminars). History.

12. Master of Arts (School of Advanced International Studies) New Total - 103

Delete: Brian Ellis Anderson
Bruce Baker
Jeffrey William Barrett
Philip Peters Bolton
Gloria Elaine Bozeman
David Alan Brucato
Richard Leonard Collins
Roger Barry Cooper
William Huntington Copenhaver
Michael Goeffrey Crosthwaite
David Bryan Dlouhy
John Alan Eckstein
Ann K. Eggleston
Carolyn Ann Emigh
Claudia Beth Engelman
John Philip Evans
Frederic B. Francke
Lawrence David Gilson
Eric Max Hameister
Lawrence M. Hannah
Philip Samuel Jessup
Peter Roff Johannson
Kenneth Raymond Johnston
Jeffrey A. Katz
Hans Albert Keller
G. Alfred Kennedy
Robert McDowell Lloyd
Carla N. Lofberg
James Megellas
Ronald Everett Myers
Arturo Milton Ottolenghi
Douglas K. Ramsey
Cristobal David Senior
Martin Frederick Smith
Brian Eliot Sullam
John Michael Willingham
Rinze Dirk Andries Zylstra

Add: Anne Prescott Gault , of Portland, Ore., B.A. Stanford University, 1969.

13. Doctor of Philosophy (School of Advanced International Studies) New Total - 11

Add: James A. Nathan , of Highland Park, Ill., B.A. Indiana University, 1964; M.A. The Johns Hopkins University School of Advanced International Studies, 196